THE

ARCHITECTS'

JOURNAL

THE ARCHITECTS' JOURNAL
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A supplement devoted to the subject of heating will form part of next week's issue. During and since the war important advances have been made in the technique of heating, and the Editor feels amply justified in concentrating on it alone, leaving the consideration of the allied matters of lighting, ventilation, etc., to future issues of the JOURNAL.

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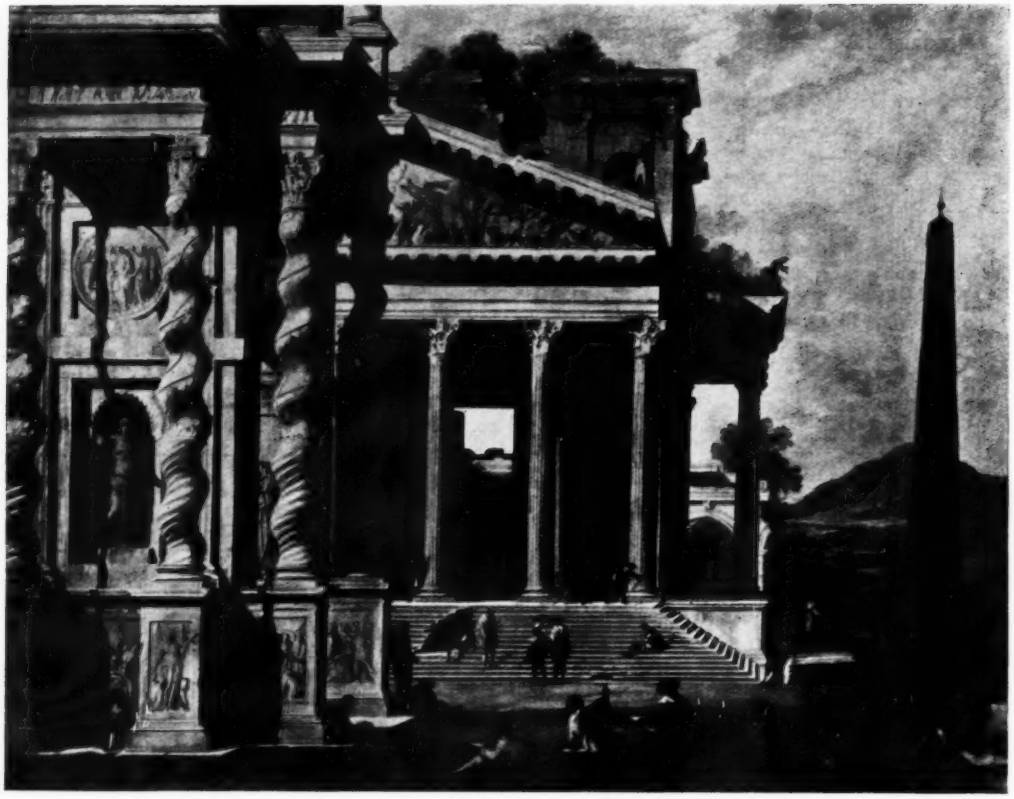
CHRISTIAN BARMAN, *Editor*

The Editor will be glad to receive MS. articles, and also illustrations of current architecture in this country and abroad, with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.



RENDERINGS OF ARCHITECTURE

Selected and annotated by Dr. Tancred Borenius.

xxiii. Viviano Codazzi (*c.* 1603-1672).
Roman Ruins.

Here is an interesting example of a Pannini before Pannini—showing, in other words, how far back the origin of the typical and ubiquitous eighteenth-century picture of Roman ruins may be traced. This painting bears an ancient and probably accurate ascription to Viviano Codazzi, a native of Northern Italy, who studied in Rome, settling subsequently in Naples, where he lived from 1629 to 1672. The artist has brought together a phantastic jumble of architectural and archæological ingredients, introducing, for instance, in the edifice in the foreground, the twisted columns, alleged to have adorned the Temple of Solomon, and of which one may be seen in the Cappella della Pietà at St. Peter's. The figures are said to have been painted by the Neapolitan artist, Micco Spadaro, and give an amusing illustration of the eagerness with which research, copying, and measuring were at that time carried on among Roman ruins, not least by Northern art students.—[Dresden Gallery, No. 433.]

THE ARCHITECTS' JOURNAL

Wednesday, June 23rd, 1926

BUILDING REGULATIONS FOR REINFORCED CONCRETE

The dispute between the London County Council and the professional societies, which arose out of the Council's Bill seeking power to relax regulations concerning buildings of ferro-concrete construction came up before a Select Committee of the House of Lords last week, and a compromise was arrived at which apparently satisfies both parties. At first sight it would seem as if the dispute had nothing to do with any matter of principle, because the spokesmen of both the London County Council and the four professional societies concerned, the Royal Institute of British Architects, the Institute of Civil Engineers, the Surveyors' Institute, and the Institution of Structural Engineers, were agreed that it was eminently desirable that as methods of ferro-concrete construction, if not in their infancy, were certainly subject to continual modification, it would be unwise to hinder their practice by too many restrictions. The real point at issue, however, was one of status and procedure, for the professional societies, with very great difficulty and as a result of prolonged negotiations, had caused a proviso to be inserted in the existing Building Act to the effect that regulations made by the London County Council should not only be subject to the confirmation of the Minister of Health, but that they should not be confirmed by him until they have been advertised and deposited for public inspection and have been communicated to the four professional bodies. These latter expressed the view that there should be no extension granted by Parliament of the powers conferred upon the Council to make regulations with regard to ferro-concrete construction unless such regulations were clearly confined to matters to which the professional bodies would agree that they were intended to apply; and they maintained that the effect of the regulations which have at present been made by the Council has undoubtedly been to hamper the adoption of reinforced concrete construction. Under this section of the 1909 Act as it stands, and still more so under the section as it is proposed to be amended by the Bill, the Council could make regulations which would hinder the use of ferro-concrete even more effectively than those which they have already made.

It is clear, then, that in spite of the London County Council's asseverations that its one object in seeking further powers is to make things easier for architects and engineers making use of ferro-concrete in their buildings, the professional bodies are unable to divest themselves of the suspicion that the hand of the London County Council is a heavy hand, and that the proposed new regulations of this body are less likely to lead to a new freedom in building practice than to new restraints. The Ministry of Health also took exception to the Council's claim to take powers in particular cases to waive or modify the requirements of the regulations and conditions as the Council think fit, especially as the amendment of the law, proposed in the sub-section, "would enable the Council at their pleasure to discriminate between one form of construction and another, the products of one manufacturer and those of another, and the proposals of one building-owner and those of another."

What would be the effect of the Council's proposals? In the first instance, they deal with conversions. Under the Act of 1894 the Council had power to deal with other types of building when these were converted from one user to another, but they had no power in connection with converted reinforced concrete buildings. It seems reasonable enough that if a building be converted from, say, a domestic purpose to a public purpose, the necessary structural alterations should, in the interests of public safety, be insisted upon. The London County Council next proposed "That in order to facilitate the erection of any particular building intended to be constructed wholly or partly in reinforced concrete, the Council may, in relation to that building, modify or waive upon and subject to such terms and conditions as they think fit any of the requirements of the regulations made under section 23 of the London County Council (General Powers) Act of 1909." This clause is intended to give greater freedom to those designing in ferro-concrete. It is followed by an addendum, however, to the effect that "Any person failing to comply with any term or condition attached to any such modification or waiver as aforesaid shall be liable on summary conviction to a penalty not exceeding £20."

The professional bodies claim that the Tribune of Appeal set up under the 1894 Act should operate here also, so that the right of appeal which existed with regard to steel-framed buildings should apply to reinforced concrete buildings. The Select Committee of the House of Lords, presided over by Lord Redesdale, decided this point in their favour. Thus, while the London County Council have obtained powers to revise the existing regulations with regard to ferro-concrete construction, the right of any individual practitioner to appeal against their decisions to a competent Tribunal of Appeal has been safeguarded. This appears to be the best compromise which could be arranged in the circumstances, and the professional bodies are to be congratulated upon having obtained a concession which may well prove to be a very valuable one.

NEWS AND TOPICS

RESULTS have fully justified the repeated postponement of Sir William Davison's question with regard to the Thames bridges, for in the House of Commons on Wednesday, the Prime Minister announced that he had decided to appoint a Royal Commission to inquire into the whole question. Much will, of course, depend on the character of the Commission itself. Although at one time it was the custom to have a large body, of recent years the tendency has been to appoint on Royal Commissions not more than five members of wide experience and impartial judgment. The Samuel Coal Commission, which was appointed by the present Prime Minister, consisted of only three members. But whatever may be the result of the new Commission's deliberations, the nation owes a debt of gratitude to Sir William Davison, Sir William Bull, Sir Martin Conway, and Colonel Gretton, for the fight which they have put up for Waterloo Bridge in the House of Commons, and to Lord Crawford for his untiring labours in the House of Lords, as well as behind the scenes. Had it not been for their efforts Waterloo Bridge might well have been doomed.

* * *

Sir William Davison is, of course, a Fellow of the Society of Antiquaries, and Vice-president of the Royal Society of Arts. He has represented South Kensington in the Unionist interest since 1918. It is noteworthy that Sir William had a narrow escape from disappointment for the third time last Wednesday, for when he put his question Mr. Baldwin was not in the House. There was some slight confusion, and Captain Hacking, who represents the First Commissioner of Works in the Commons, rose to explain that he had understood that the Prime Minister would be present to answer the question in person. At this moment, however, Mr. Baldwin could be seen hurrying into the Chamber from behind the Speaker's chair. His appearance was greeted with ironical cheers, which, however, speedily changed to an outburst of enthusiasm as the full significance of his reply dawned on members.

* * *

Sir William Davison's question was couched in the following terms. He asked the Prime Minister : " Whether he would appoint a special committee of qualified persons to consider and report as rapidly as possible on the bridges over the Thames in the London area and the approaches thereto; as to what additional bridges, if any, were required or would shortly be required, and of those which in the opinion of the committee were of the greatest urgency and should first be proceeded with ; and, pending the report of such committee, whether representations should be made to the Corporation of the City of London to defer further action with regard to the proposed St. Paul's Bridge ? " Mr. Baldwin replied that : " Having regard to the public anxiety which the question of London's bridges had aroused and the variety of interests and circumstances which had been taken into account in this connection, the Government had decided to appoint a Royal Commission in order that the whole subject of the bridges over the Thames in the London area may be impartially and authoritatively reviewed."

* * *

It is suggested in Parliamentary circles that, pending the result of the inquiry to be undertaken by the Commission, the City Corporation would probably be prepared to hold its hands in regard to the proposed St. Paul's Bridge and that the London County Council would do everything that is necessary to maintain Waterloo Bridge in its present state. It is hoped that the Government will urge the Commission to furnish an interim report dealing with the question of an additional bridge and the position it should occupy. If it is decided that a bridge ought to be provided at Charing Cross, then it is held it would be unnecessary that Waterloo Bridge should be reconstructed to carry six lines of traffic, as a bridge available for three lines would in the circumstances be all that was required. The Government's decision to have the whole question investigated is regarded as eminently satisfactory in view of the controversy which has been taking place over a long period.

* * *

The news of the Prime Minister's decision will bring joy to the hearts of those who for many months have been fighting a battle on behalf of Waterloo Bridge. There can be no doubt that in appointing the Commission the Prime Minister has accurately interpreted the wishes of the general public in this matter. The last few weeks have seen a most remarkable display of energy on the part of publicists and others who have recognized the urgent need for a combined effort on behalf of the bridge. The gallant action of Sir Reginald Blomfield in declining to assess the London County Council competition while there was the slightest hope of the bridge being saved was followed by a petition to the Prime Minister signed by a large number of distinguished people representative of all classes of society. The Press, both daily and weekly, has done a great work in drawing the attention of the public to the matter. The *Times*, the *Morning Post*, the *Manchester Guardian*, the *Westminster Gazette*, the *Observer*, and the *Sunday Times*, have proved themselves to be redoubtable champions on its behalf, and there can be no doubt that the propaganda conducted by these newspapers has enormously strengthened the hands of the Conference of Societies which originally took upon itself the task of defending Rennie's masterpiece.

* * *

One of the most interesting features of the present controversy is the emergence of Mr. T. S. MacColl as one of the foremost protagonists on its behalf of Waterloo Bridge. Recently appointed to the Commission of Fine Arts, he has proved himself to be a most valuable addition to that body. His articles during the last few weeks in *Country Life*, the *Saturday Review*, the *Morning Post*, and the *Daily Telegraph*, have attracted wide attention, and have been especially useful in that, while emphasizing the practical aspects of the subject, they have also dealt so cogently with the æsthetic aspect. Mr. MacColl is one of the few " art critics " who knows anything about architecture (this may seem a harsh statement, but I am prepared to stick to it), and his intervention in the dispute has given the greatest satisfaction to architects in general. I cannot forbear to quote Mr. MacColl's analysis of the æsthetic qualities of Waterloo Bridge. In rebuffing Ruskin's contention that Rennie's design was " a string of canal bridges, all tittivated," Mr. MacColl writes : " This is an odd description of a bridge which has no unconstructional decoration whatever unless we except the massive coupled columns of the piers. The reason for their existence is twofold : imaginatively they emphasize the vertical down-

drive of the piers, resolving the thrusts of the arches on either side, and Rennie's adoption of this particular device is evidently due to his sense of neighbourly construction. His main *datum* was Somerset House, and he set himself to continue the motifs of its basement, unfortunately now masked to some extent by the Embankment. The great water-gate in the centre is echoed by his arches, and the coupled columns are taken from the two entrance archways under the flanking pavilions; the granite of the bridge bears out the heavy rustication of Chambers' Portland stone; the " tittivation," therefore, was the salute of one great designer to another, but none the less congruous with the aims of his own structure. How the metre of his nine arches plays in with the rich rhythm of Somerset House I should like to analyse, but it would call for illustration; suffice it to say that out of the threes and sevens and nines of window spaces he has adopted the nines on his larger scale. Somerset House, big for old London, is modest in dimensions, but by every consideration, in the bridge itself, and its masterly conjunction with the building, Rennie made a friendly neighbour of his Cyclopean chain for the noble delicacy of Chambers." The civic qualities of Rennie's design have never been better described.

* * *

And now as to St. Paul's Bridge. I see that Canon Alexander has presented a memorial to the Prime Minister emphasizing the danger to the cathedral which the proposed new structure is likely to cause. In the opinion of the Office of Works, too, there is a possible risk from any disturbance of the *status quo* around St. Paul's. It is known that there has been a definite movement to the south and west of the south transept, and also a movement of certain of the dome piers in a similar direction. As these movements apparently have no relation to the normal stresses set up by the structure of the building, it would appear to be a sign that there is a tendency to slip in the foundations, or in the subsoil underlying the foundations, which might seriously imperil the structure if it were likely to repeat itself or to continue in the future. By the way, in writing about St. Paul's, I am reminded of Queen Victoria's opinion on the cathedral, which I came upon in one of the recently published volumes of letters. " The cathedral itself is so dull, cold, dreary, and dingy. It so lacks decoration and colour." But, perhaps Sir William Richmond has put that right now.

* * *

Every time I pass the clearance around Victoria Station I am filled with sadness. No, not at the destruction, but at the grand opportunity which is now offered and which will not be utilized to the full. Victoria Station is the chief gateway to London from the Continent; here most of the visitors of eminence arrive to be greeted by the King, or his representative. The station is not situated, as are most of the other termini, in congested areas, and now there is every opportunity for making an imposing entrance into Victoria Street and northwards into Grosvenor Gardens, an opportunity which every city in the world would seize. But I fear London not. We are so accustomed to alighting from our trains and plunging straight into disreputable squalor and turmoil that we fail to realize the effect which such a procedure must have upon every foreigner who is accustomed to wide open spaces about his railway stations. And while on the subject of stations, I must quote once again from the letters of Queen Victoria ; this time I give her approbation: "Midland Station, one of the finest buildings in London." Was it not in the building of St. Pancras that Sir Gilbert Scott consoled himself for Lord Palmerston's ruthless persistence upon the " classic style " for the Foreign Office design ?

* * *

I am glad to see that threats to injure particularly beautiful tracts of country tend to arouse protests more readily now than heretofore. England is a small place, and, Goodness knows ! there remains little enough of her erstwhile beauty. I am thinking just now of Dover's Hill, which is threatened by the builder (there was a time, by the way, when man's building activity enhanced rather than destroyed the landscape: now the word building is regarded as synonymous with defacement), and Frensham Pond, which is threatened by the engineer. I know both Dover's Hill in the Cotswolds, and Frensham Pond in Surrey, and on the face of it the protests seem justified. There is a certain type of mind, of course, which deems it preposterous that if a certain site is the most suitable from the physical point of view for a certain purpose, such as sewage disposal, that site be not used. With such a one the welfare and happiness of the community at large count for nothing, and are worth no sacrifice.

* * *

A most interesting experiment in building is now being made at Woodbridge School, where a new chapel is being erected, largely by the labour of the boys themselves. What the local trade unionists have to say on the matter is not recorded ! The site chosen is one near the war-memorial, so that eventually it may be possible to include both chapel and memorial in laid-out grounds. A design has been provided by Mr. F. C. Eden, A.R.I.B.A., for a building 80 ft. long, 21 ft. broad, and 35 ft. in the centre, where there are two shallow transepts. The chapel will accommodate about 150 people, and the material will be timber on a brick foundation with a tiled roof. The initial work of excavating and trenching was largely done by the school; many of the boys have been occupying themselves in morticing, sawing, etc., under the direction of the school carpenter, while others have industriously filled in trenches and carted bricks. I should like to hear what proportion of the boys, as a result of these labours, has been imbued with an ambition to become architects, or to take up some form of craftsmanship seriously.

* * *

In the last of Mr. William Harvey's articles on stonework, a stonemason's house was illustrated. Its appropriate, though Scottish, name (" Durlestone ") pleased me, because I like houses to have reasons for their names. (And this also was the explanation given by the man, twelve months married, when caught changing the name of his domicile from " Rusholme " to " Ellinside.") One name I have remembered with pleasure since I saw it on a new house twelve years ago. " Dunure " it was called. Pronounced aright, I regarded it then—and knowing the forlorn condition of the house to-day, I regard it now—as the last derisive touch of its jerry builder.

ASTRAGAL

THE COMPLETION OF GREENWICH HOSPITAL [1702-15]

[BY ARTHUR T. BOLTON]

[This is the bicentenary year of the death of Sir John Vanbrugh, whose work, having been mildly ridiculed for a great many years, is at last becoming recognized as possessing a degree of vigour and consistency that has not since been equalled. Until Mr. Bolton discovered the Greenwich Hospital drawings in one of the albums at the Soane Museum, it was not known that Vanbrugh had ever actively associated himself with this celebrated edifice. The project here illustrated dates from the period which, it will be recalled, saw the end of Vanbrugh's career as an operatic impressario, and his first recorded contact with the Earl of Carlisle, for whom he built Castle Howard.—Editor, A.J.]

THE story of Greenwich Hospital is very far from being completely known, and considerable doubt has long existed in respect of the authorship of the composite design of its truly magnificent group of buildings. The three architects, Sir Christopher Wren, Sir John Vanbrugh, and Nicholas Hawksmoor, are here grouped together from a feeling that there was a real fellowship in the developments of its design. The first idea of the foundation is variously given to the years 1692 and 1694. The first certain dates seem to be Evelyn's visit to survey the site in 1695, and the actual laying of the foundation stone by Evelyn, Wren, and Flamstead on June 30, 1696. The tenders and contracts with the separate masters were being arranged between February and June of that year.

A print is here given of the works as designed and in progress in 1699, as a point of departure (figure six). Prior to this must be placed the original plan (figure two) and view (figure three) of Wren's first proposal, this going back to the first idea of the utilization of the Palace site as a hospital. The interesting point then arises, who was

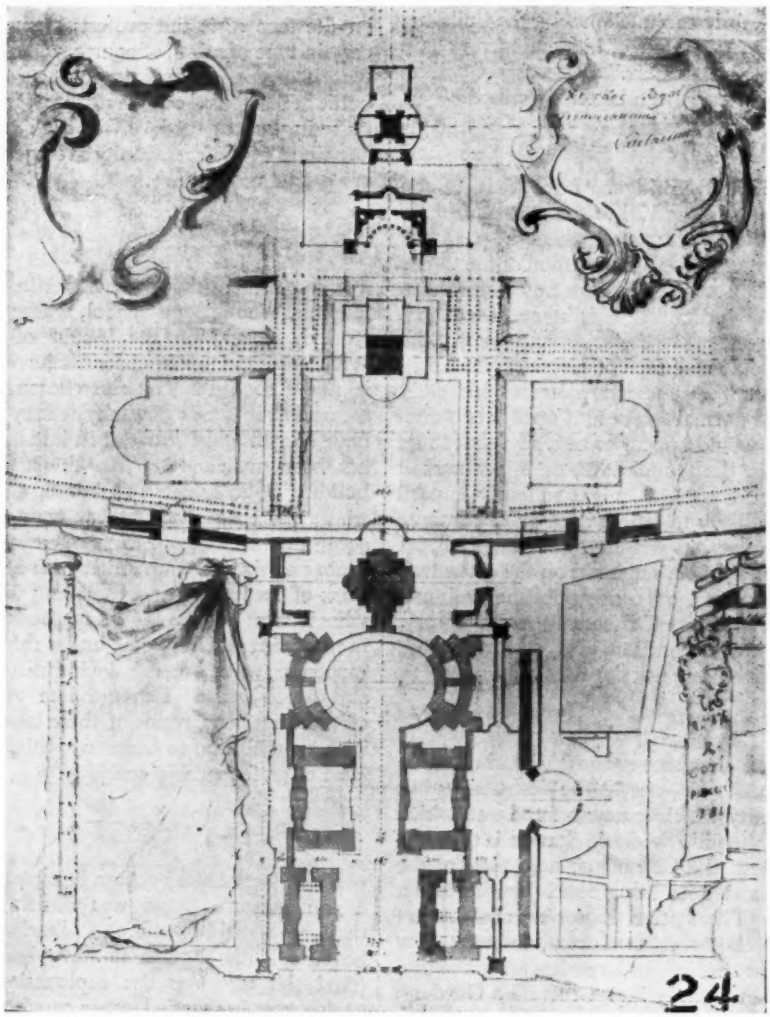
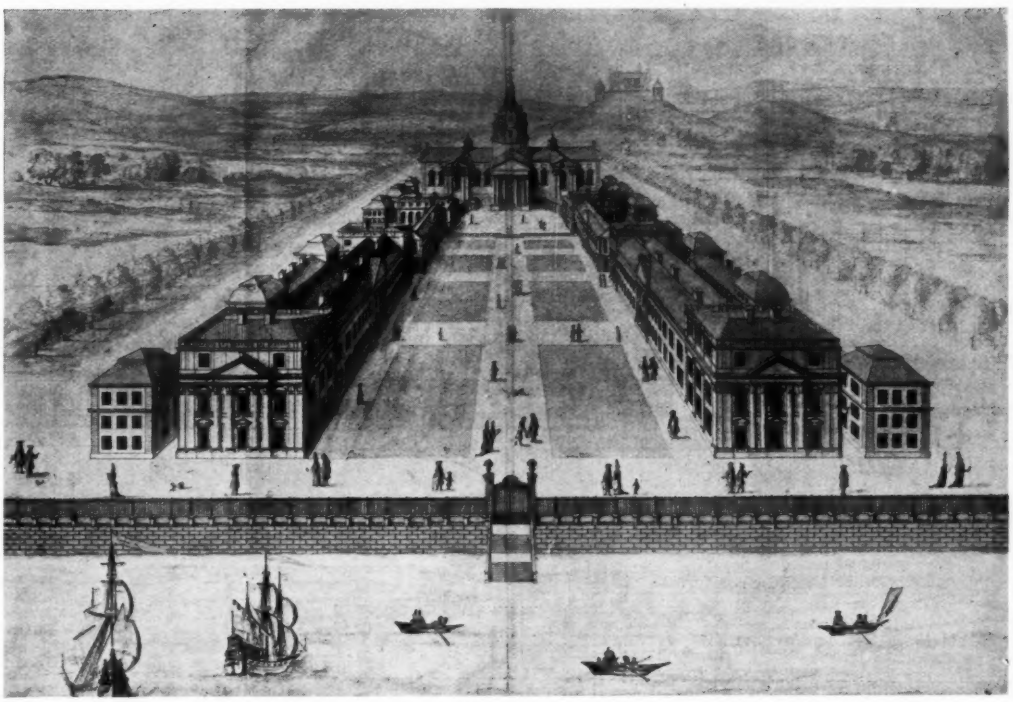
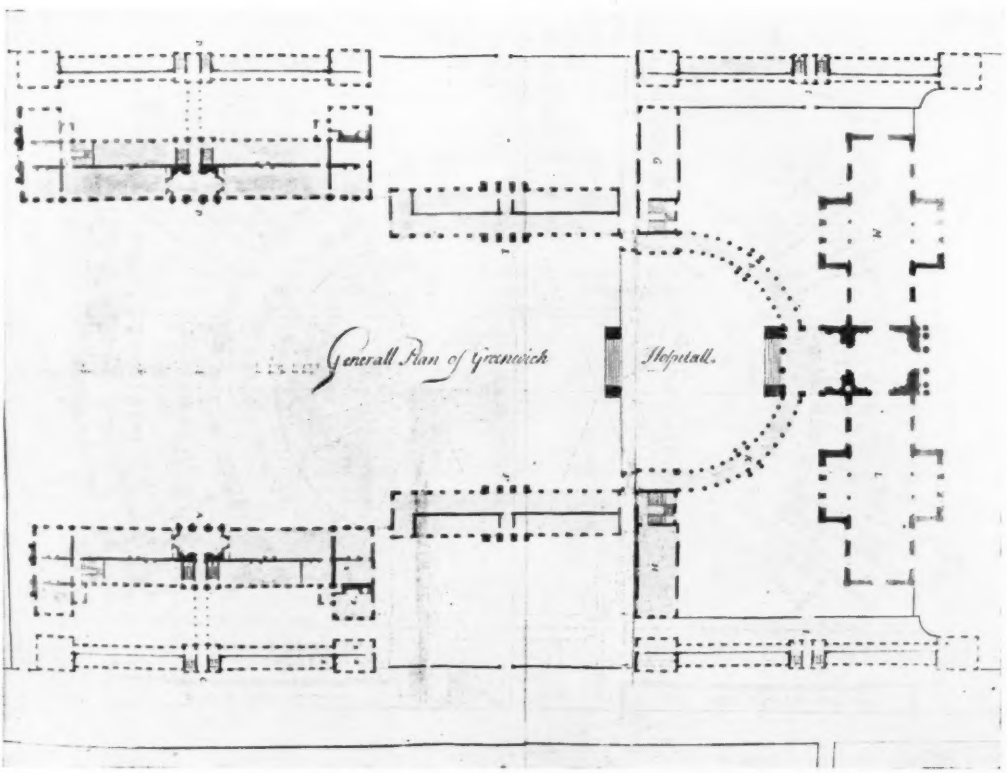
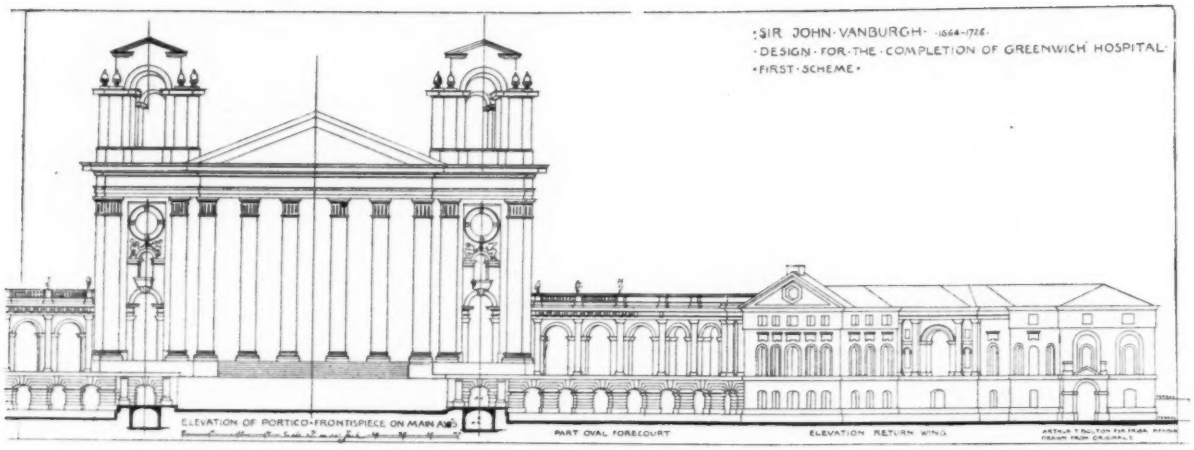


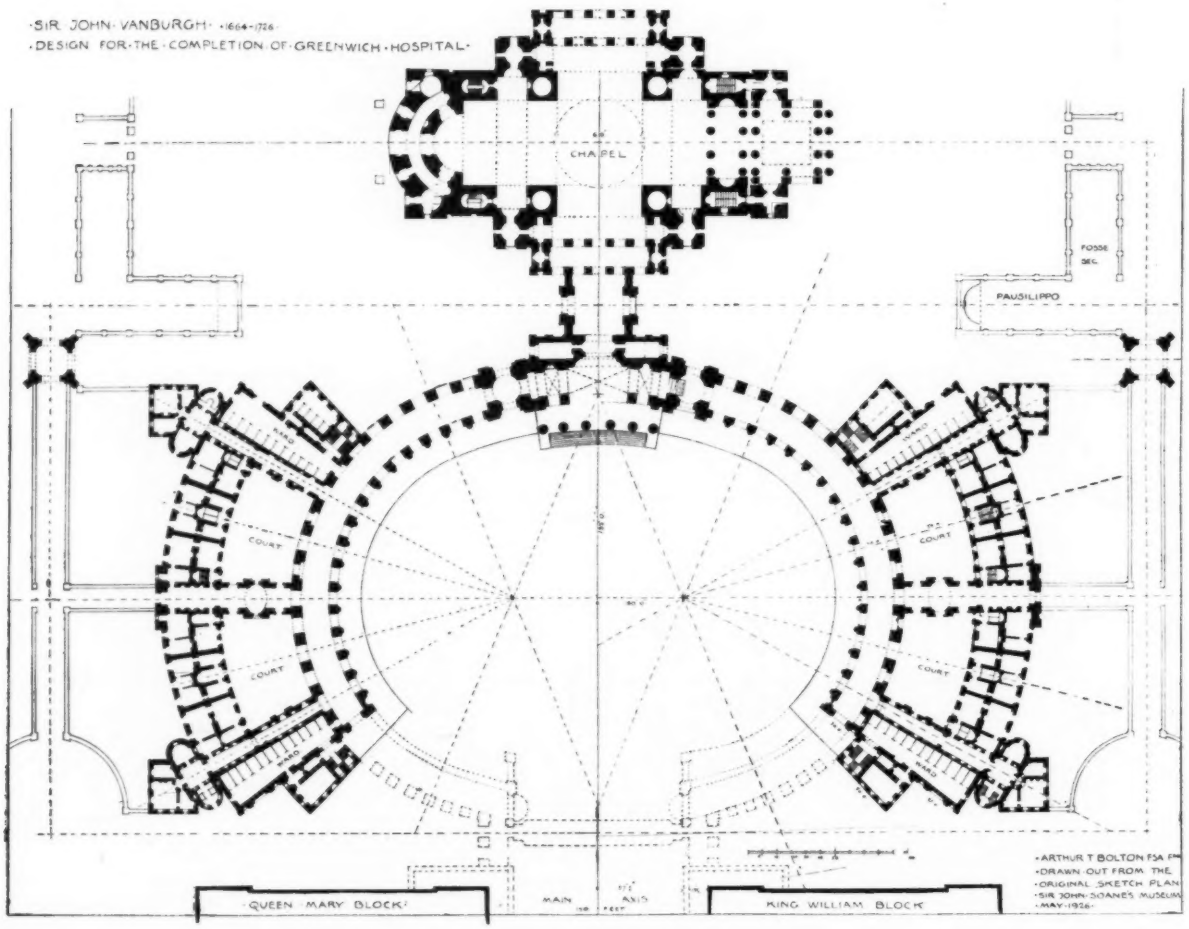
Figure one. Key plan of the 1702 scheme for the completion of the Hospital.



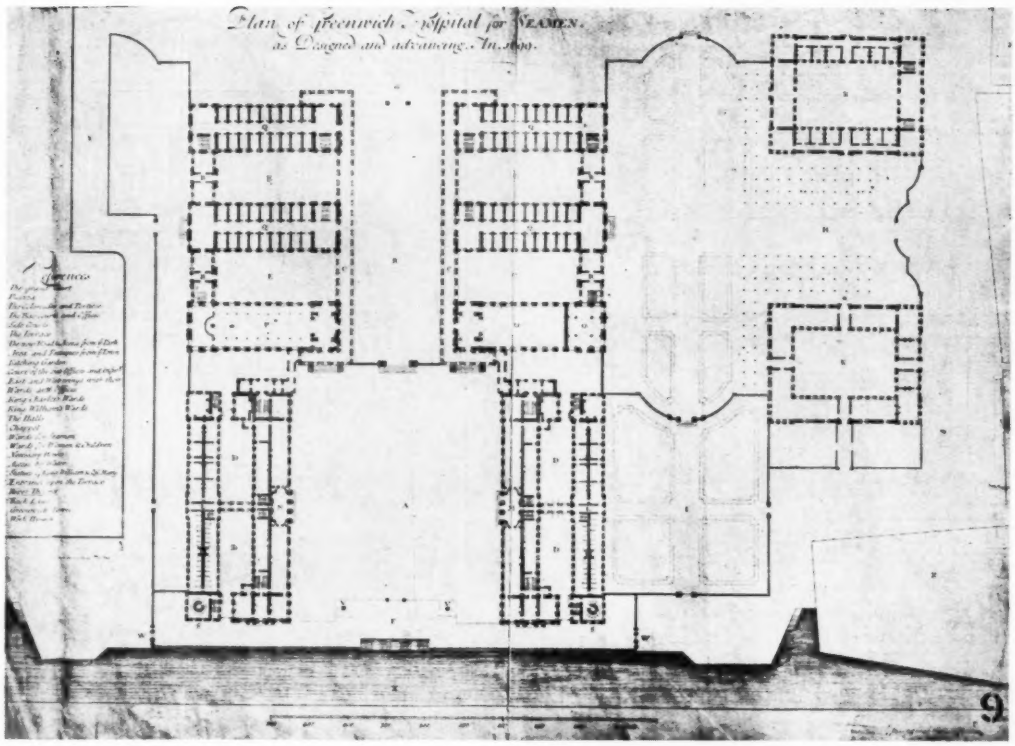


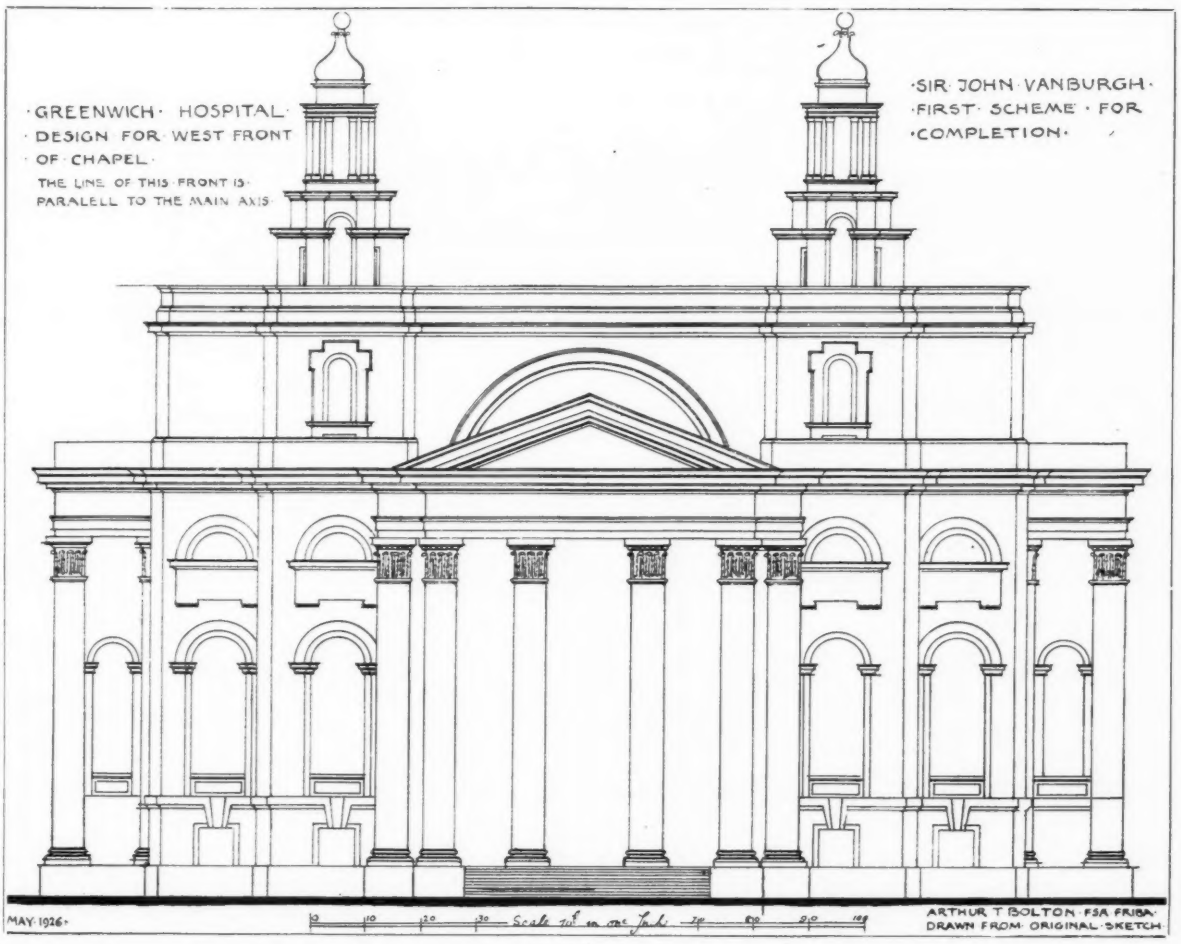
Figures two and three. Sir Christopher Wren's first design for the Hospital.



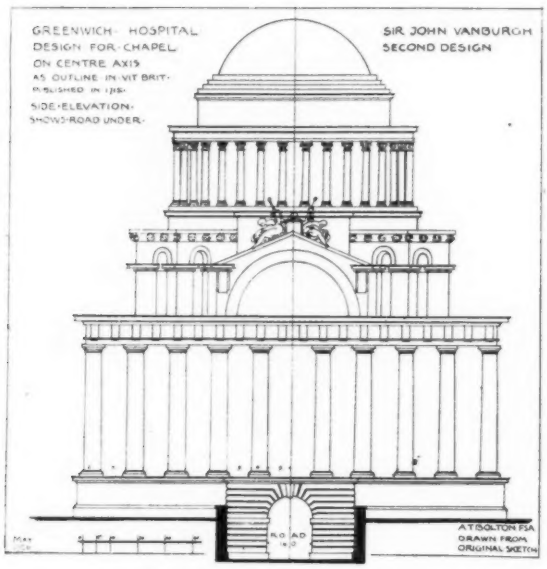


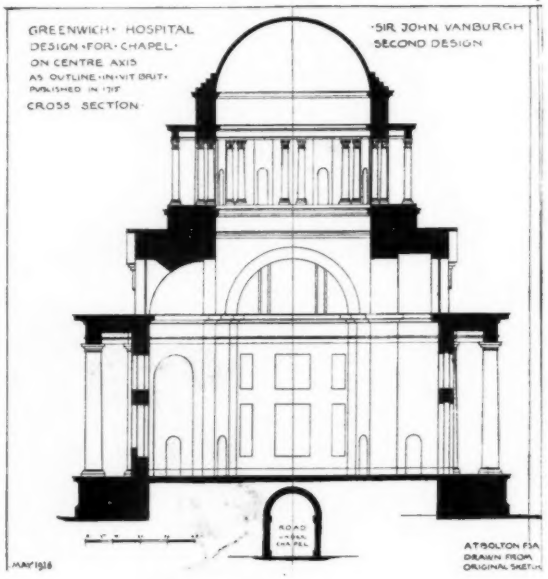
Figures four and five. Sir John Vanbrugh's first design for the Hospital.





Above, figure six. The Hospital as designed and in progress in 1699. Below, figure seven. Sir John Vanbrugh's first design for the west front of the chapel.





the author of the magnificent conception, dated 1702, for the completion of the work shown as in progress in 1699? This plan of 1702 (figures one, four, five, and seven) has now been drawn out, and completed from a half-sketch plan and elevation in Sir John Soane's Museum. It is to be noted that already in 1696 local complaints were being made that Wren and Evelyn were too much occupied elsewhere, and lived too far away to give adequate attention to the works at Greenwich. (Anonymous letter to the committee at the Guildhall, London.)

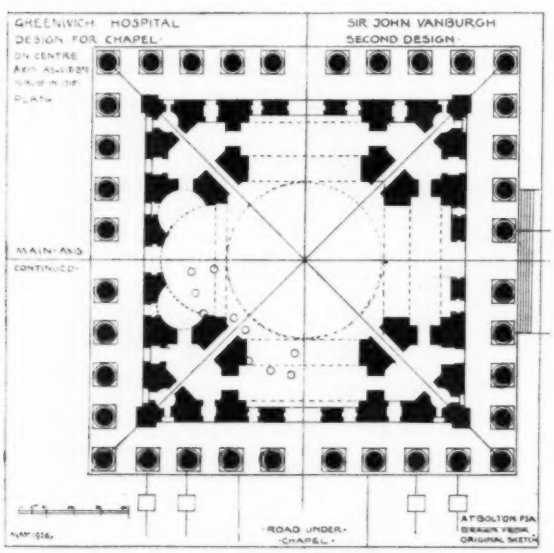
The scheme of 1702 seems to have the characteristics of Vanbrugh's original initiative in architecture. Fortunately the writer has found among the drawings, preserved at Greenwich Hospital, but now at the R.I.B.A. on loan, the key plan (figure one) of this great design. On the right hand will be seen a masonry pedestal, with an inscription that deserves careful attention. It reads :

ANNA.
R. (egina)
COTI. (Coronati ?)
MDCCII. (1702)
B.S.L. (Pro Bono Publico et Salus Legum)

The last line would thus be a symbol which may perhaps be thus expanded. If this is correctly interpreted, this design of 1702 would date from the earliest days of Anne's accession, and is thus coincident with that of Castle Howard with which it has obvious analogies.

Wren, born 1632, was now seventy; and Vanbrugh (1666) was only thirty-six years, as near as may be half Wren's age. It has always been a tradition that the most friendly relations existed between them. Vanbrugh, we know, declined Wren's succession, when the veteran was so shabbily dismissed by George the First, "out of tenderness for Sir Christopher Wren." Moreover, the working assistance given by Hawksmoor, Wren's domestic clerk for twenty years, in the actual execution of Blenheim, and almost certainly of Castle Howard as well, is notorious.

[To be concluded]



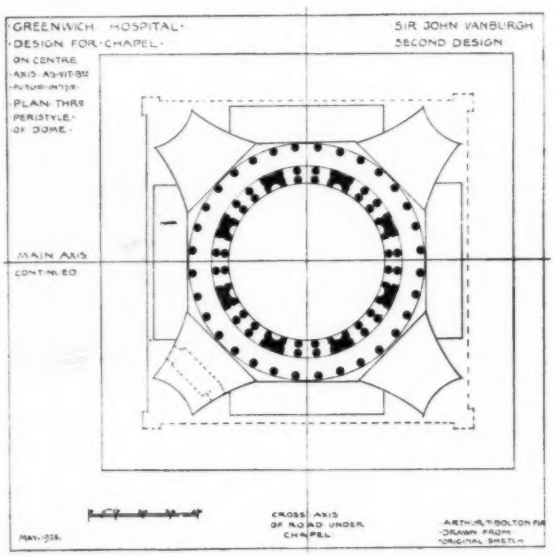


Figure eight. Sir John Vanbrugh's second design for the chapel.

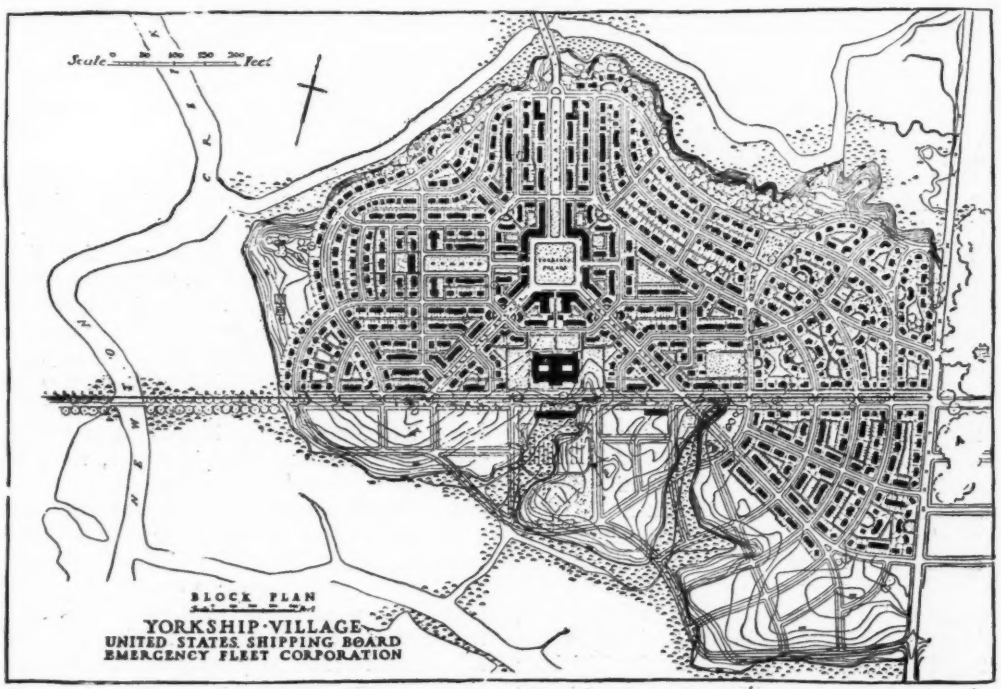
CURRENT
ARCHITECTURE
SECTION

SOME SMALL AMERICAN INDUSTRIAL TOWNS

[BY W. HARDING THOMPSON]

YORKSHIP VILLAGE, Camden, near Philadelphia, was the largest Government housing project constructed during the war, and by far the most successful from both the town planning and the architectural point of view. It attains a remarkable cohesion of plan and architectural homogeneity without ever appearing dull, yet the same materials are employed throughout, together with the use of the colonial idiom in the treatment of the street façades. It possesses, in fact, all the flavour and unity of a town built entirely in the eighteenth century, without reference to an earlier mode of expression, yet it is unmistakably modern in its conception and execution. Compared with other war-time schemes Yorkship gains in dignity by having

Yorkship Village, New Jersey. By E. Litchfield. Above, the most important buildings, which are grouped round the town square. Below, plan of the village.



an urban rather than a suburban and rural character, and this is achieved by the more formal treatment of its central square and parkway, and especially by the employment of blocks of houses instead of detached and semi-detached units.

The town was planned, under the general supervision of the Emergency Fleet Corporation, to accommodate the shipyard employees in Camden, N.J. The architect and town planner was Mr. E. Litchfield, Messrs. Lockwood Green & Co., being the engineers. The site was a practically level area bordered on the north, south, and west by small tidal streams or estuaries, whose high-water lines limited and defined the area in these directions. The eastern boundary is the improved highway, affording a connection with Camden, and there is also direct communication by street car services with the shipyard. The natural limitations have not only dictated the plan, but fortunately made Yorkship a self-contained independent community. Newton Creek, the northern boundary, has been spanned by a new concrete bridge, so as to afford the most direct route between the Broadway and the shipyards in Camden.

The main approach street, forming the main axis of the lay-out, is 120 ft. wide, and extends from the concrete bridge to the central square of the town. Around the square are the more pretentious buildings, including apartment houses, shops, etc. A park area, 140 ft. in width, extends westward from this point as the minor axis of the plan, affording a pleasant setting for churches. The total area developed is 160 acres; the area of the house plots about 80 acres; sites for special buildings 1·8 acres; schools, recreational and community purposes, including parks and playgrounds, 35·6 acres; streets about 61 acres. The town includes about 1,400 dwellings, of which a little more than 1,000 are in rows, and the balance are detached and semi-detached. The gross building density is 7·8 dwellings to the acre.

Yorkship Village, New Jersey. By E. Litchfield. Colonial "motifs" have been used throughout the scheme.

Atlantic Heights, near Portsmouth, N.H., is a war emergency scheme, built for the Atlantic Corporation. It is of quite a different type, and was designed by Messrs. Kilham, Hopkins, and Greeley to accommodate the shipyard workers in a neighbouring factory. But whereas Yorkship has an urban character and follows the more southern tradition of brick buildings, Atlantic Heights is partly brick and partly timber built, and has a more rural character in sympathy with its delightful natural surroundings. The site of the village is some 60 acres of undulating land, which, rising abruptly from the Piscataqua river (where ships were built during the war), stretches back in a continually rising slope until it culminates in a point from which is obtained a wonderful panorama of typical New England scenery, embracing farms and forest. An ancient wharf on the site was revived, thus contributing to the quick and cheap delivery of materials by water.

The plan appears a little dull on paper, but actually the houses are admirably adapted to the contours, and the road plotting and approaches are well suited to the site. The three points which determined the plan were: first, the best position for the approach bridge, which spans the valley (between Portsmouth and Atlantic Heights); secondly, a natural transverse depression or swale which would carry the drainage sewer for most of the tract; and, thirdly, a picturesque cove with the old wharf which provides the only landing place on the river bank. The angle of Ranger Street is determined by the line of the shipyard boundary, and along this line, nearest the gate, are placed the eight dormitories, each containing single rooms for fifty men. These dormitories are arranged so as to form a slight barrier between the houses and the factory. A space for shops and community buildings (such as a cafeteria) is reserved facing the small triangular village green, suggestive of an English village, and on the high ground, where there is plenty of playing space, the school will be built.

One thing which at once strikes the English visitor is the absence of any fences in front or as divisions of the plots, and although a sense of space is hereby obtained, none of the tenants has attempted to make gardens, the whole area being under grass. All the houses are heated by furnaces, and supplied with electric light and the usual high standard of sanitary equipment found in all American cities. There is one fact which should be noted, viz. that

Yorkship Village, New Jersey. By E. Litchfield. Every road terminates on a satisfactory climax.

the dormitory blocks were all built first, and very rapidly (about six weeks); these not only supplied immediate accommodation for factory workers, but rooms for others engaged in building the rest of the village.

Bridgeport, Con., is an example of a war-time urban housing scheme, where shipyard workers were accommodated on vacant sites of the existing city. The schemes in this city are interesting; chiefly as providing excellent examples of block dwellings, well planned and grouped. The architects of the buildings were Messrs. Sturgis and Parker, of Boston, who also carried out work on other sites in the same city. In this particular scheme (Black Rock development) the site included a number of fine old trees, which were utilized to good advantage by ingenious planning. The high land value and a strong local demand led to the adoption of the apartment house type in a series of more or less connected units, each consisting of a three-story six-family, two-room deep apartment house, with a central heating plant for the entire project, but with each unit so arranged as to make possible independent ownership and the installation of a separate heating unit

The planning gives a density of 31·9 families per gross acre, yet provides for ample light and air and a pleasant outlook for every room. The spaces in the courtyards form shady playgrounds for children, and have some fine trees. The entire lay-out is a repetition of only three different plans of three-, four-, and five-room units, so simple as to allow of their being placed in many relative positions, and giving great flexibility in solving problems resulting from an odd-shaped plot of ground. The total area planned at "Black Rock" is 6·77 acres, and there are apartments for 216 families, which corresponds very closely to some of the reconstructed areas in London.

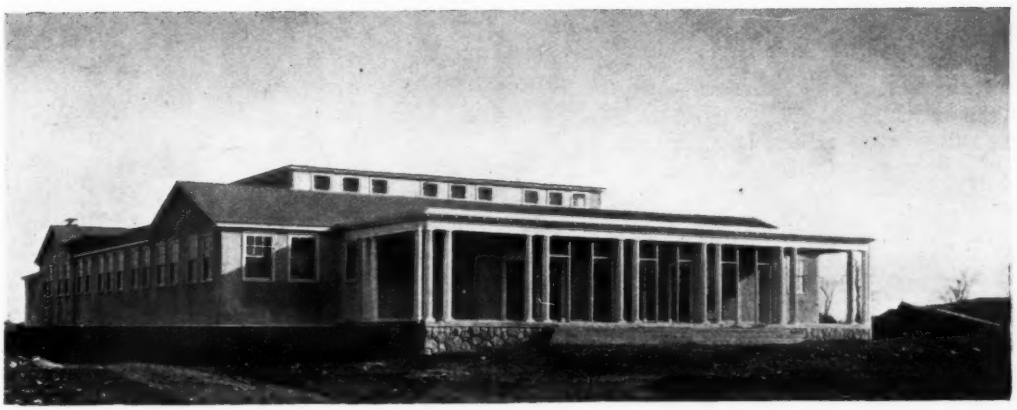
Mariemont, near Cincinnati, Ohio, is America's contribution to the international garden city movement, but it should be regarded more as an example of an ideal dormitory town rather than a garden city in the sense that Letchworth and Welwyn exemplify. For Mariemont fails in three fundamental points: 1: The town is not designed primarily for industries supplying a livelihood for the inhabitants; 2: there is no agricultural belt, therefore no protection from undesirable developments on the adjacent lands; and 3: the land is not owned by the community. Mariemont is situated some seven miles from the city of Cincinnati, and was developed at the expense of Mrs. M. M. Emery as an attempt to demonstrate how a community may be built in which people of small income may obtain houses either by rental or purchase at a cost proportionate to their wages or salaries. Public services are provided at a nominal cost. Although started by a sense of public duty, it is not intended to be an example of philanthropy, but essentially a business proposition.

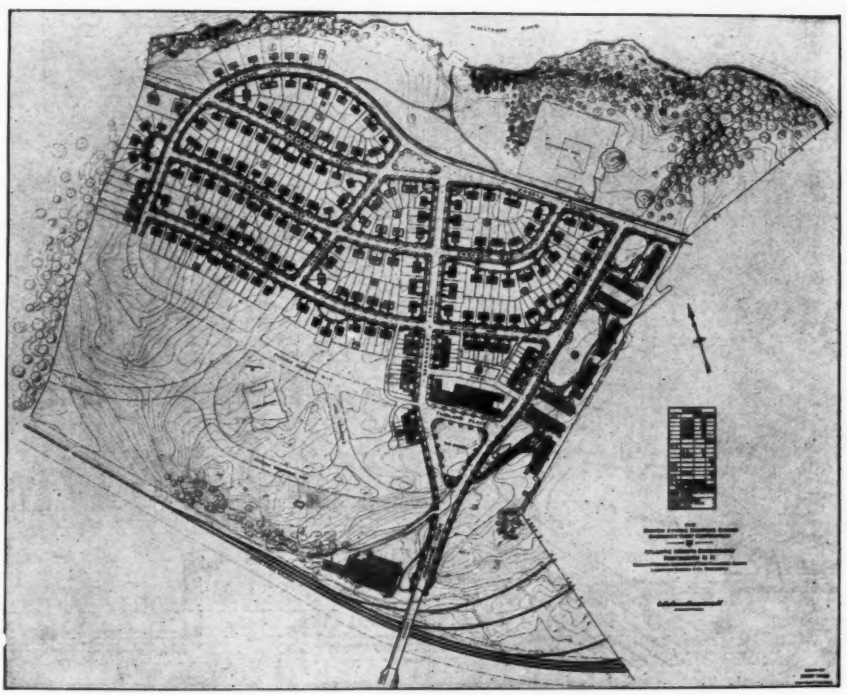
Mr. John Nolen, of Cambridge, Mass., was responsible for the lay-out, and several eminent architects have been employed on the various groups of houses, shops, and churches, etc., already completed. The plan provides for a town centre, with its green and public buildings, town hall, library, club house, churches, hotel, theatre, community building, post office, bank, and public market, also for schools, parks, and playing fields. There is a very attractive little park and boulevard on the steep bluff overlooking the Little Miami River and the surrounding country. The property includes 365 acres, one half of which is devoted to houses (a density of six or seven to the acre), laid out on similar lines to Letchworth. The public services include water, drainage, electricity, and steam heat from the central plant. The last named is an interesting fact, because in England it is not considered an economic proposition to supply central heating in an "open" development. The size of the plots varies from 20 ft. × 100 ft. for terrace houses, to 80 ft. × 120 ft. for detached dwellings.

The underlying purpose of Mariemont is to prove the practicability of constructing as a business enterprise model communities which will combine the advantages of community life with the freedom of the country, and which will prove that good housing and town planning in America are not dependent on philanthropy, but that they will pay for themselves as legitimate business ventures. If this demonstration succeeds in the way anticipated, it is likely that many real garden cities will be undertaken in several

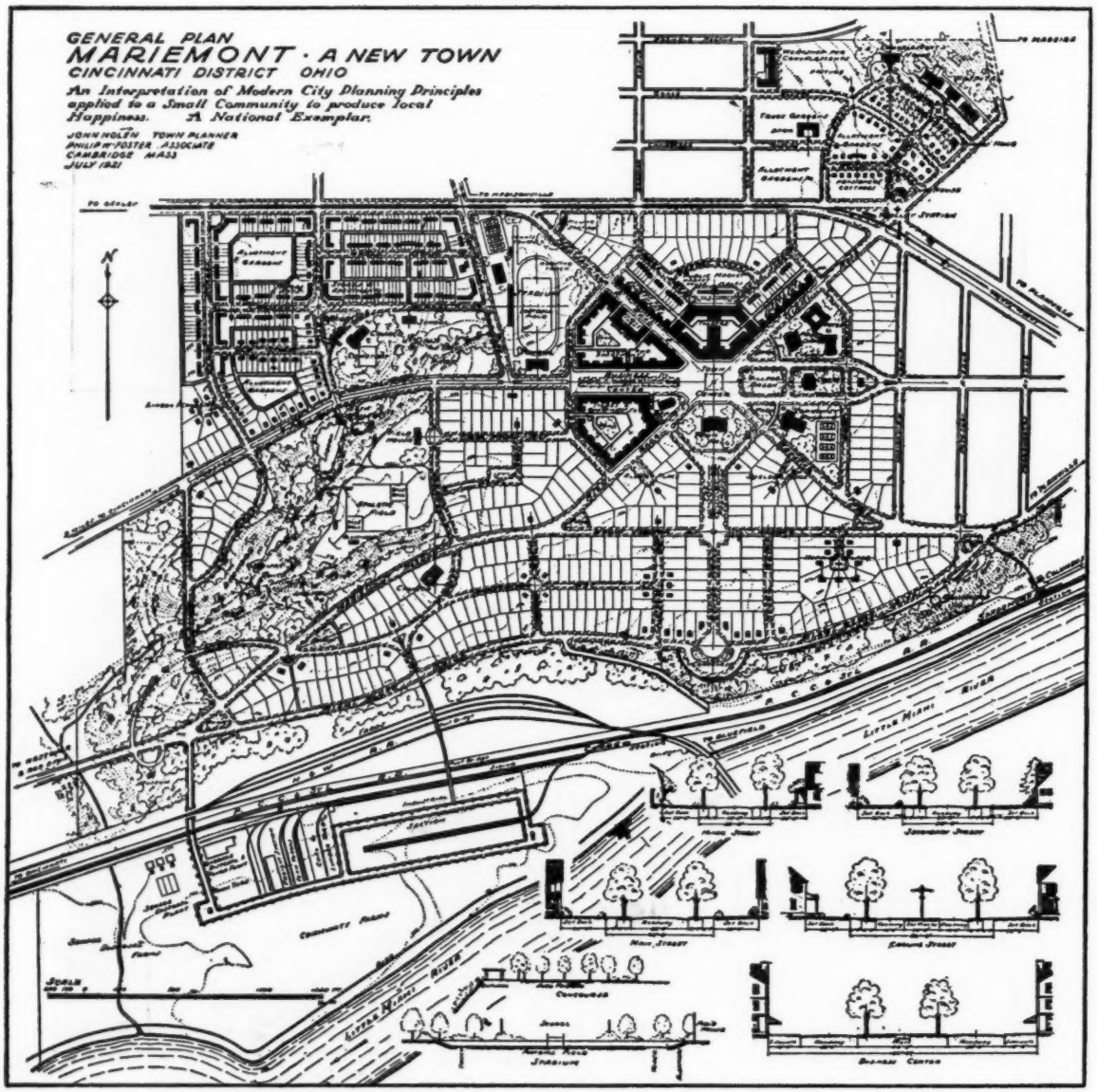
other places, and so help to arrest the too rapid growth of the great American cities, which are already almost too big to be workable. Although the English visitor will admire the excellent designs of that portion already built at Mariemont, he will be struck by the very exciting and self-conscious appearance of several of the houses owing entirely to the pronounced individuality of treatment and the unusual variety of materials employed.

Above, Yorkship Village, New Jersey. By E. Litchfield. Centre, a block of flats, Bridgeport, Connecticut. By Sturgis and Parker. Below, stores at Atlantic Heights, near Portsmouth, N.H. By Kilham, Hopkins, and Greeley.

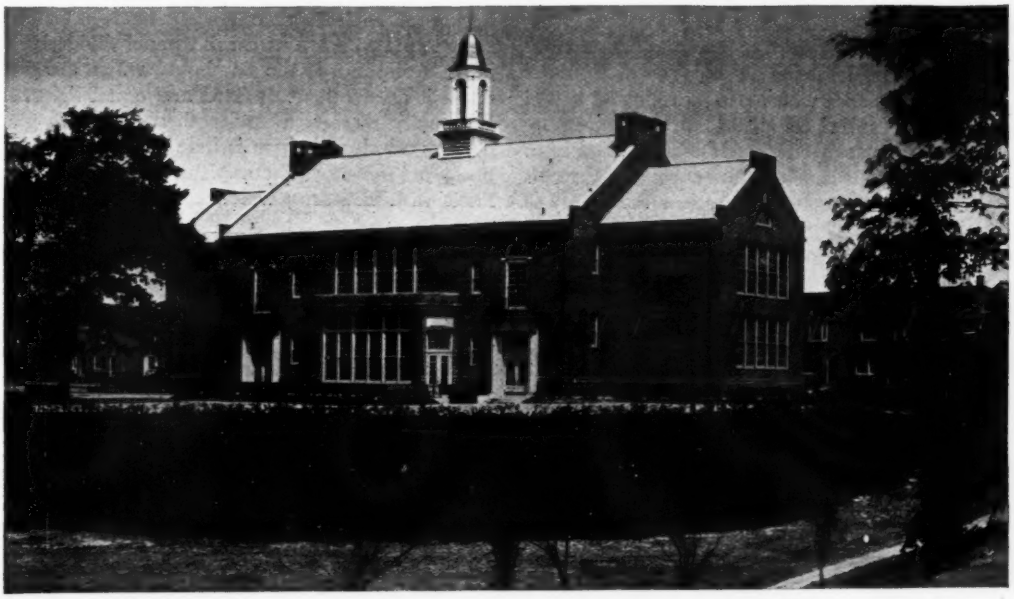




Atlantic Heights, near Portsmouth, N.H. By Kilham, Hopkins, and Greeley. Above, two views in the village. Below, the lay-out plan.



Mariemont, Cincinnati. Above, a farm group. By Herbert E. Reeves. Below, the general plan. By John Nolen and Philip W. Foster, associate.



Mariemont, Cincinnati. Above, a group of houses. By Charles F. Cellarius. Centre, a small elementary school. By Fechheimer, Thorst, and McCoy. Below, a group of houses. By Charles F. Cellarius.

THE NEW CHENIL GALLERIES

[BY P. M. STRATTON]

THE New Chenil Galleries is a building to be enjoyed by experiencing it from within, and by exploring it from the centre outwards, finding the circumference or exterior last. It is not built with a face of commercial assertiveness, but to contain, to guard its paintings; and to shut off outer noises from the music in its shell. To realize of how secondary importance is the front of the galleries one had best be lead in blindfold, or first awake to consciousness of art within its walls. And as a child is surprised on first realizing its own reflection in a mirror, by the absence in its shape of the horizontalities of its regular life, and by the lack of the avenues of its memory, by the invisibility of impressions made by the delicious sensations of eating and warmth; in like manner the spirit haunting and homing in this interior, knowing its long vistas and the definite shapes of the spaces which are its rooms, and the turning of its stairs, must feel conviction, on contemplating its front, that the important things had been screened from public gaze, and its intimacies made decorous, and its life conventionalized. The site allows (on the front) of nothing more substantial. It is long and narrow, and the galleries must perforce be in sequence.

This spirit of the interior is a very individual thing, influenced certainly by the uses of the building, and by ancestry in the styles of Robert Adam and Soane, but ending in a character all its own making. From Robert Adam comes the treatment of gallery number two, modelled very closely on the Alpine Club. Supported above a large cove is a lantern with sides leaning in to a domed parallelogram. It is all expressed with slight mouldings, only deep enough to indicate the lines of æsthetic construction because there is no other intricacy to engage the eye; the dado, splash-painted, on which the pictures are hung, is cut off by the low cornice.

The remaining galleries seem more akin to Soane's interiors of the Bank of England and his Walworth Church. The shaping of the hall is extremely clever. The long vista from the front entrance on to the platform at the end of gallery number one is an effect of depth and distance obtained at one blow by planning. The keenest sort of pleasure in architecture has always to do with space, and such delight is given by the space effects of this hall with gallery number two and gallery number one in succession beyond it. Each room is different from the other, yet not so different as to lose relationship. The unity as a suite is kept by the axial lines, which seem to coincide though they may not quite do so in reality, and by the characteristic treatment of detail which is carried throughout. Gallery number one has a flat ceiling with the centre part filled in as a solid panel divided by the same rhythm of panes as the side lights, which are glazed. The result is an excellent diffused and equal light for pictures. Externally there is a saw-toothed roof with glazed north lights, and clearly there is here one solution of the vexed problem, how to light a picture gallery. The walls are lined with boarding which cuts across the angles. The British Broadcasting Company transmits chamber music from here, and the acoustics of the room are understood to be satisfactory. Here also are given the musical expositions of Miss Edith Sitwell's poems.

These two uses of the building, for painting and music, have influenced the handling of the architectural problem in a subtle way, beyond and apart from the necessities of light and sound, and main shape. The modelling generally does suggest that the designer was acutely conscious of the intimacies of the arts, and that he so refined his mouldings as not to clash with the arts less substantial than architecture. But, further, he has imparted to his sections a feeling of alliteration with the

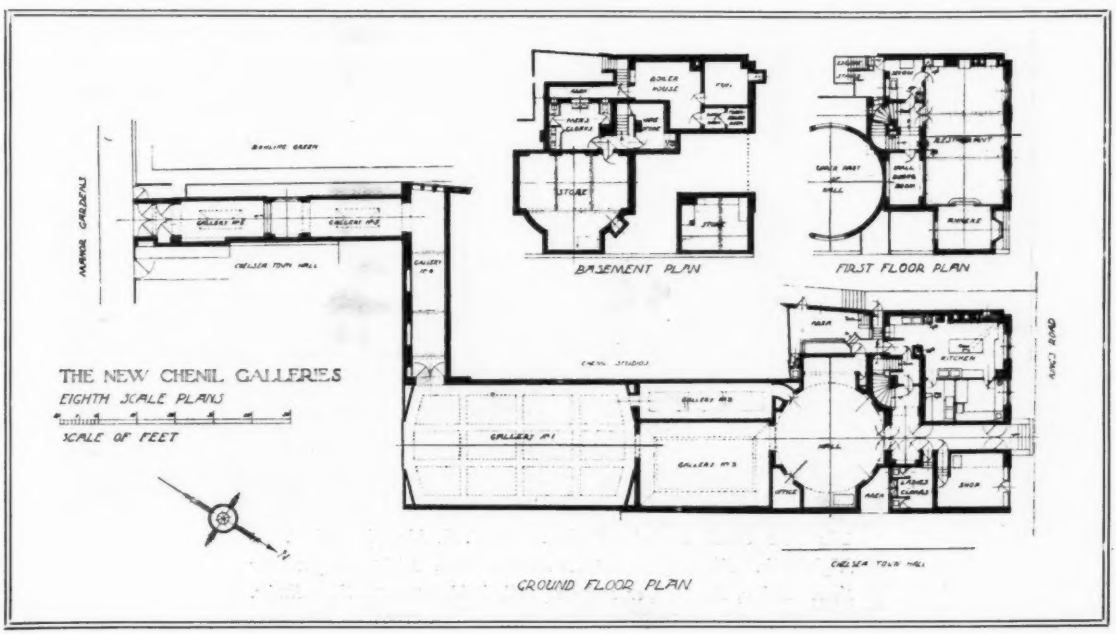
The New Chenil Galleries, Chelsea. By G. L. Kennedy and F. B. Nightingale. The main front.

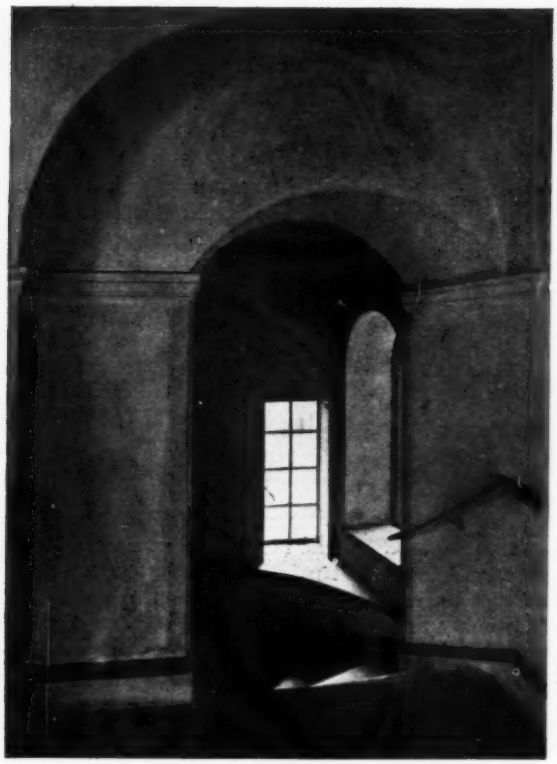
sensations given by painting and music. It is as though the word Chenil had been invented once upon a time to make by alliteration something perfectly belonging to Chelsea.

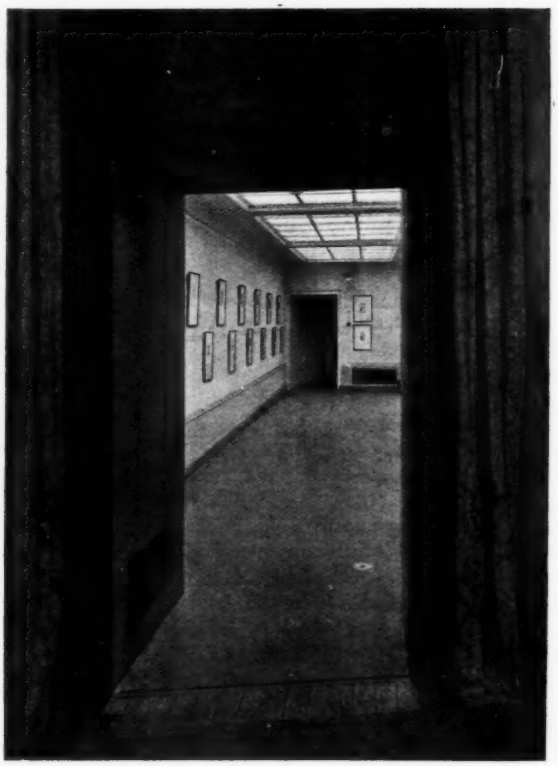
The building faces north, and has on its east side the Chelsea Town Hall, on its west side is a brick gable, and then a typical Chelsea small house, narrow and high, with an almost vertical roof starting from behind a thin-coped parapet. With the shape of this old house the Chenil building has much in common, but strong difference with Leonard Stokes' Town Hall. The latter's bold featuring of columns, porch, and turret, and its general air of vigorous expression has been difficult to outface by neighbouring buildings. The Chenil Galleries looks rather thin and insipid at first glance, and needs isolating in thought from its companion for a time before its delicacy can be enjoyed. It is a higher building than the Town Hall, not only in roof, but in cornice, and as there is so much difference in "weight" between the two, it was doubtless sound design to place the Chenil cornice somewhat higher than Stokes', whilst at the same time preserving the general cornice line of the street. An unusually high roof, which might easily have been overpowering, has resulted. The junction between wall and roof has been a difficult problem, and one, perhaps, not quite satisfactorily solved. The massing of the second-floor windows (below the frieze) with main dormers so close above has helped to give scale and concentrate the "play" of the building; the line given by the differing slopes of the roof lightens the "weight," but the cornice by its thinness and projection might be thought to act as a disintegrating feature just where it should have been a binding and reconciling factor. The tilting of the roof out towards the cornice edge might also be thought a little coarse, at the same critical section of the façade. Otherwise the front gives a vivid pleasure.

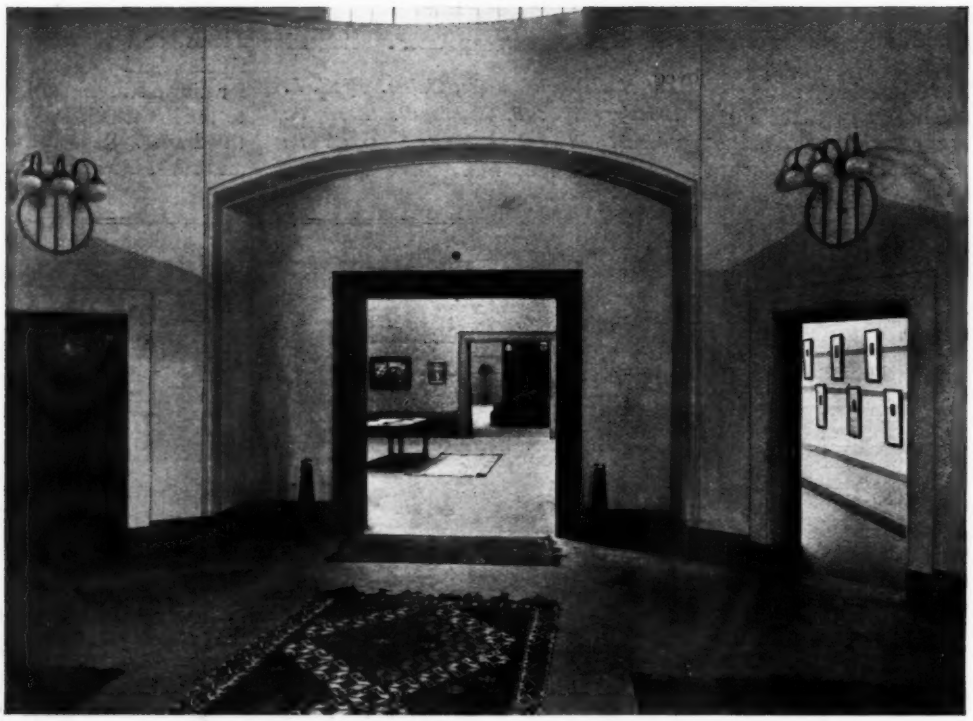
It may be true that paintings, music, buildings, plays, can best be criticized each apart from the other. But the primary reason for their creation is for enjoyment by the senses, not depreciation or even appreciation, by the intellect. A passivity of mood must be reached by the mind before full enjoyment is possible, and satisfaction cannot be obtained if certain of the senses are left hungry. This need to sustain all the senses at once, keeping them balanced, is the justification for the architecture of the New Chenil Galleries. For here are architectonic shapes, not insistent, but subtle and refined, wearing like jewels the painter's coloured emblems, and containing the waves, ripples, and whispers of music, and forming a still and quiet background to the lightened, darkened, mirror of the drama. [For list of contractors and sub-contractors see page 863.]

The New Chenil Galleries, Chelsea. By G. L. Kennedy and F. B. Nightingale. Above, the entrance hall and staircase. Through the doors is the main hall. Below, the plans.









The New Chenil Galleries, Chelsea. By G. L. Kennedy and F. B. Nightingale. Above, left, a first-floor staircase detail. Right, gallery number three. Below, the main, or sculpture, hall, looking towards the galleries.

The New Chenil Galleries, Chelsea. By G. L. Kennedy and F. B. Nightingale. Above, gallery number one, looking towards galleries three and two. Below, gallery number two, looking towards gallery number one.

The New Chenil Galleries, Chelsea. By G. L. Kennedy and F. B. Nightingale. Above, gallery number one. Below, the restaurant.

THE COMPETITORS' CLUB

THE PROMOTION OF COMPETITIONS

THOUGH the reasons why a competition is promoted are not often very directly a concern of the competitors, they are yet of interest as influencing the form the competition takes. It may be assumed that in the majority of cases the promoters are mainly governed by a genuine desire to get the best possible building for the purposes they have in view, and very naturally consider that a competition is the most likely mode of attaining this end. Not only do they believe that architects equal in capacity to any one they might select will be prepared to compete, but that this capacity will be working in an intensive way under the stimulus of competition. Looking at the matter broadly, it may be agreed that this assumption is justified, though it is a matter of general knowledge that there are men of high standing in the profession who do not feel any such stimulus, and who will honestly affirm that they can only do their best when feeling assured that their design will be actually carried out. These must, therefore, be written off the list, though some will succumb in the case where the number competing is so limited as to give a greater measure of hope.

At the present time the standard of design in the open competition is such as to justify promoters in adopting it. They will obtain, barring accidents, a design that is more likely to fulfil their requirements than any obtained by other methods of procedure. This must not, however, be accepted as implying that they are sure to get a building of outstanding distinction, by reason of the fact that the problem is almost necessarily set on economic and practical lines, and has to be adjudicated on these. In most cases this is what the promoters want, and neither an assessor nor an architect commissioned for the work, will be able to reconstruct their mentality, which is, after all, not without justification when we bear in mind the phases of architecture once widely acclaimed that are now regarded as ephemeral expositions of bygone fashions.

Where the promoters are solely concerned with the efficiency of the scheme they will demand an open competition, but where they have definite ideas as to the architectural character of the building they may elect to choose only those whose work conforms to this; in which case they would do well to obtain a list of likely architects from their assessor, and invite these to submit illustrations of executed work, thus being enabled to select the exponents of the type of design demanded.

In another case the promoters are not only considering the actual design, but also the conduct of the work, and may feel a preference for an architect near at hand, with whom they can confer at any time, and who will, they imagine, keep in closer touch with the work than one at a distance. There is often a feeling that a professional man is more jealous of his reputation in his own district than elsewhere; it is probably fallacious, but it exists, and reinforces the demand for limiting a competition to those practising within a certain area.

Sometimes, again, a competition is instituted because the promoters feel that certain architects have more or less equal claims to employment by them, and these are, therefore, invited to compete, or, where these claims are more nebulous, the competition may be made a local or an open one. The view seems to be securing recognition that in the case of a competition limited by invitation, an assessor may be dispensed with, or if not dispensed with, he need be an adviser only, provided each competitor is remunerated. There is some justification for this view, as it is obviously allowable to commission an architect to prepare a design without guaranteeing that the building will be carried out, but the scale provides a charge for such work, and while it is doubtful if architects would unanimously support this charge under all circumstances, it would be absurd if a payment utterly disproportionate to it were regarded as acceptable in the case in point.

Competitors are making a most drastic concession and running a serious risk when they give up the demand for adjudication by an assessor, and their position is so greatly modified by this, that payment on the usual scale of premiums would be most unfair. May it not be justly claimed that a sum approximating to one per cent. on the estimated cost of the building should be the amount offered to each competitor invited under these conditions, and is it not incumbent on the R.I.B.A. if that body decides that competitions may be run on these lines, to define what may be regarded as "adequate remuneration" for the preparation of unsuccessful designs. The inadequacy of the usual scale of premiums has already been pointed out in this column, but it is of still greater importance that in the case of such "semi-competitions" as we have been discussing, the supplementary remuneration should be on a definite and adequate footing.

One last word; we have been visualizing the promotion of a competition from the architects' point of view, but we ought not to disregard the fact that it has often, where the promoters have been really interested, given them a most valuable insight of the principles underlying design generally, particularly in the case where the assessor has been able to make his decision a text as to the difficulties of the programme and how they have been surmounted.

SENESCHAL

COMPETITION CALENDAR

The following competition is announced with the full approval of the R.I.B.A.

Saturday, July 31. Australian National War Memorial, Villers Bretonneux, France. Open to Australians. Particulars from the High Commissioner's Office, Australia House, Strand. Deposit £2 2s.

The conditions of the following competitions have been received by the R.I.B.A.

Monday, July 12. Royal National Eisteddfod of Wales, Swansea, Competitions: (1) National Parliament House of Wales (Prize, £100); (2) Street Façade to a Large Stores (Prize, £25); (3) Set of Measured Drawings of Architecture (Prize, £25). Assessor, Mr. Arthur Keen, F.R.I.B.A. Particulars from the publishers, Messrs. Morgan and Higgs, Heathfield Street, Swansea (1s. 2d. post paid).

September 30. Cenotaph for Liverpool. Assessor, Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A. Premiums, first, £200; second, £150, provided he is an ex-service man; third, £100; fourth, £50. The author of the selected design will be paid a commission of 500 guineas, which will include the premium of £200 above-mentioned, and, in addition to preparing all the necessary working drawings and superintending the erection of the work, he will be required to superintend the erection of a full-size wood and plaster model of his design on the site. Particulars from the Town Clerk.

The conditions of the following competitions have not as yet been brought to the notice of the R.I.B.A.

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Sir John Burnet, R.A., British representative on jury of assessors.

No date. Manchester Town Hall Extension. Assessors, Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A.

COMPETITION NEWS

The President of the R.I.B.A. has been informed by the Secretary of State for Foreign Affairs that the competition for the choice of a plan for the construction of the League of Nations building at Geneva will open on July 25. One hundred and fifty copies of the programme of the competition will be forwarded to the R.I.B.A. as soon as they are received from Geneva.

THE ARCHITECTS' CASH BOOK: ii

[BY OUR FINANCIAL CORRESPONDENT]

[In this article, the first instalment of which appeared last week, our financial correspondent explains a simple method of bookkeeping which he has specially evolved to meet the particular requirements of the architect. He also gives some important advice with regard to disputes over income-tax assessments, and shows how they can be avoided in the future.]

ALL receipts for payments should be given a number, and this number should be entered against the corresponding payment in the cash book, as shown in the illustration (reproduced last week), so that any account can be quickly found when required for reference.

As banks always request that their customers examine their pass books at least once every month, the pass book should, therefore, be obtained at a convenient date (monthly) and reconciled with the cash book.

The cash book, as shown in the illustration, has been so designed as to facilitate checking with the pass book, and the reconciliation when completed should be entered in the cash book, without fail. If there are numerous entries in the cash book, it is advisable to prepare an agreement every week, but reconciling should not be left more than a month. If the cash book is kept in the manner prescribed, the checking off of the payments into the bank will be child's play, but if the cash receipts are entered up without regard to the agreement with the totals on the paying-in slips, the operation will take twice as long.

First check off the payments into the bank, and note those which have not been credited by the bank at the date of balancing with a distinctive mark.

Secondly, check off the cheques drawn with the cheques presented as per pass book, again putting a distinctive mark against those cheques which have not been presented for payment at the balancing date.

Finally, examine amounts debited in the pass book which are not checked off, and enter these as payments in the cash book.

These may be classified as falling under one of the following heads :

a : Collection charges.—These are either shown as payments in the pass book (or deductions from the amounts credited in respect of Scottish cheques, colonial and foreign drafts), and stamps on cheques.

b : Discounting charges on bills.

c : Cheque books.

d : Charges for keeping account.

e : Interest—under various heads :
(1) On current account (overdraft).
(2) On loan.
(3) On any other specific advance.

f : Commission in respect of turnover (charged by certain banks).

Dealing with *a* to *f seriatim*, these amounts should be posted to the following ledger accounts :

a, *d*, and *f* to bank charges; *b* and *e* to bank interest; *c* to stationery.

It will be clearly seen from the above that, if the bank charges are written up without any analysis, the wrong accounts are debited. Should the cheque payments be very numerous arrangements should be made with the bank to enter the cheques in the pass book by *number* instead of name, in order to facilitate the checking, and if the bank agree to this system, a column must be ruled in the cash book against the name column for that purpose. An agreement with the cash book (as illustrated) is also shown, and it will be found advisable to put against the cheques not credited or not presented, the dates these cheques were actually credited or presented respectively, as shown by the pass book. It may, of course, not be possible to put every date in, as some cheques are very often not presented for a long period, but this is not usual in the ordinary course of business.

In conclusion, after the first agreement has been arrived at, before checking the cash book again with the pass book, check off with the pass book the cheques not credited and not presented, as shown by the last agreement, and do not tick these items in the cash book where they were originally entered.

BANK AGREEMENT, MARCH 31, 1926

BARKLEESE BANK LTD. (CHEEPZYDE BRANCH)

				£315 11 0	
				69 0 9	
	Balance as per Pass Book				£246 10 3
	Add	*Date credited*			
CB 417	Cheques not credited	April 6		129 8 0	
					£375 18 3
	Less unpresented cheques	*Date presented*			
CB 417	North-Eastern District Electric Light Supply Co., Ltd.	April 7	£4 8 0		
CB 417	May, L. H. (Rent) ..	April 8	40 0 0		
CB 417	G.P.O. (P.M.G.) ..	April 7	2 0 0	46 8 0	
	Balance as per cash book folio 417				£329 10 3

NOTE : *At the end of the financial year a request should be sent to the manager asking him to furnish a certificate showing the amount standing to the credit or debit (as the case may be) of the account in question.*

This saves much confusion; obviously any item in the last agreement which has not been checked off is again entered in the next, until cleared up.

A long-outstanding cheque would, therefore, probably figure in the three or four agreements. If the balance as shown by the pass book was an overdraft (or debit balance) then the cheques not credited are deducted, and the cheques not presented are added.

Further, there may be a balance in hand according to the pass book, but an overdraft as shown by the cash book—this could happen as shown by the following agreement without giving details of the cheques :

	£ s. d.
Balance per pass book (credit)	340 9 11
Add cheques not credited	192 2 8
	532 12 7
Cheques not presented	539 2 2
Overdraft per cash book	6 9 7

The pass book should strictly be the opposite to the cash book, i.e. the payments in the cash book (credit side) should be on the debit side of the pass book, and the receipts in the cash book (debit side) should be on the credit side of the pass book, but, curiously enough, it is the practice of most banks to enter them vice versa, which is wrong, as the pass book, after all, is a copy of their customer's account in the bank's books.

A pass book, therefore, is properly written up if it is the opposite of your cash book, otherwise it is wrong.

The banks who do it the wrong way, I can only surmise, look upon the account as a copy of the customer's account, as it should appear in his own books.

LITERATURE

DECORATIVE ART, 1926

IT is perhaps a little self-conscious to talk of "King George V style," but then this is a self-conscious age; an unfortunate result of our comparatively recently acquired and now heaped-up knowledge of the past. However, we would like to see an increased demand for George V style furniture, because much of it is extremely good, and an increased demand will make it even better. Strangely enough, the epithet George V is applied to some pieces by Mr. Maurice Adams, but a better description would surely have been Maurice Adams style, for his furniture, while with its use of the cabriole leg and foot it carries on the English tradition, is very individual.

In the review of the year's products the standard of the English furniture is high, and there is about it a sense of form and the appropriate use of materials which, strangely enough, is entirely lacking from the French, who are reputed to value form above all else, but there is a tendency towards angularity, and occasional clumsiness. In the ceramic section the quality of the products varies very much. The State factory at Meissen would seem to be producing some delightful work; so, too, is the Royal factory at Copenhagen. By far the worst section is that devoted to metal work, and this would seem to apply to all countries. In England the loss of the Church as a patron has undoubtedly reacted to the detriment of the silversmiths' craft; so, too, has the increased habit of dining out and the decrease of entertaining. There is now little pride and little interest taken in table silver.

The architectural sections are, on the whole, disappointing. Professor C. H. Reilly contributes an interesting introduction to them, but the examples illustrated do not seem to have been chosen with sufficient discrimination. A diligent search amongst the recent work of English architects would surely have yielded more interesting results, and even where a really delightful house is chosen, such as "Lordship's Close," by Messrs. Kieffer and Fleming, it is inadequately illustrated. The foreign sections, although much smaller, are more carefully filled. There are two delightful houses by Carl Brummer, the Danish architect, one his own house at Klampenborg, the other, redolent of the Danish tradition, a house at Vedbaek. Whatever may be said against the foreign work, with the exception of America, there is very little *postiche*, and, at the same time, surprisingly little which is aggressive. The examples of our own interiors show a tendency towards Wardour Street architecture, which is scarcely typical of the day.

The *Studio*, with its year-books of decorative art, is building up a most valuable and interesting record of contemporary work, in which the next generation will be able to study the fads and phases with the same enjoyment, aye, and ridicule maybe, as we, in our turn, bestow upon the manners and fashions portrayed in *Punch* of the eighties and nineties. H. J. B.

Above, cottage at Stuttgart. Paved courtyard with fountain. By Rudolf Behr. Below, chest of drawers in figured walnut, King George V style. By Maurice Adams. [*From* Decorative Art, 1926.]

Decorative Art, 1926. The Studio Year-Book. The Studio, 44 Leicester Square, London. Price 7s. 6d. and 10s. 6d. net.

ARBITRATIONS

The series of text-books by Sir Banister Fletcher are well known to practising architects, and the younger of them, as well as present-day students, find they fill a large place among those necessary for examination purposes. Such subjects as the history

of architecture, quantities, valuations, dilapidations, light and air, carpentry and joinery, and also hygiene are dealt with in small books which show the broad avenues of general practice as distinct from the by-ways which are dealt with in the larger standard works. A fourth edition of this author's work on the subject of *Arbitration* has recently been published; the previous edition is dated 1904, so the need for a recasting is evident because of the progress made during recent years in this popular method of settling disputes. It is interesting to note that in 1873 the late Professor Banister Fletcher read a paper before the Royal Institute of British Architects on *Arbitrations*, and gave four reasons for doing so :

1. Because the subject had not before been discussed.
2. Because the architectural profession does not master the technical difficulties connected with arbitration.
3. Because of the pitfalls one is liable to tumble into.
4. Because he heartily desired the legal profession should not continue to deride the awards of " lay " arbitrators.

It was probably arising from the discussion of this paper that in the same year (1873) the Council of the Institute was requested to consider the question of a professional tribunal with an architect as judge to determine matters in difference relating to building disputes, light and air cases, and party-wall matters. Such a tribunal was set up by the late Society of Architects in 1923, and its existence until the Society's recent amalgamation with the Institute showed that it filled a well-defined want in that in a clear-cut issue, for a few guineas, a difference might be disposed of speedily by someone qualified to do so. That arbitration is becoming more and more popular is evident, as witness, for instance, the recent setting up of a tribunal to dispose of disputes in the printing and allied trades, and it certainly must be admitted to-day that the legal profession does not deride the awards of lay arbitrators. Another popular tribunal is the Institute of Arbitrators, which undertakes to deal with matters of any technical nature whatsoever. The number of such tribunals shows that the interest in the subject is great, and therefore books written by such well-known authorities as Sir Banister Fletcher are in constant demand.

Arbitrations. By Sir Banister Fletcher. Batsford, London. Price 10s. 6d.

IN PARLIAMENT

[BY OUR PARLIAMENTARY CORRESPONDENT]

A Royal Commission for Thames Bridges

The Prime Minister has decided to set up a Royal Commission to inquire into the question of the bridges over the Thames. This information was forthcoming in answer to a question put in the House of Commons by Sir William Davison, who asked the Prime Minister whether he would appoint a special committee of qualified persons to consider and report as rapidly as possible on the bridges over the Thames in the London area and the approaches thereto, as to what additional bridges, if any, were required, or would shortly be required, and of these which, in the opinion of the committee, was of the greatest urgency and should first be proceeded with; and, pending the report of such committee, whether representations could be made to the Corporation of the City of London to defer further action with regard to the proposed St. Paul's Bridge.

Mr. Baldwin replied that, having regard to the public anxiety which the question of the London bridges had aroused and to the variety of interests and circumstances which had to be taken into account in this connection, the Government had decided to appoint a Royal Commission in order that the whole subject of bridges over the Thames in the London area might be impartially and authoritatively reviewed.

In thanking the Prime Minister for his sympathetic reply, Sir William Davison asked whether Mr. Baldwin would also urge the commission to bring out their report as soon as possible, as the matter was one of the greatest urgency ?

Mr. Baldwin agreed that the matter of time was important.

Asked by Mr. Day whether the Government would adopt the commission's report when presented, Mr. Baldwin said that the Government must wait until they saw the report.

Mr. Sandeman then inquired whether further work on Waterloo Bridge was to await the report of the commission, but the Prime Minister said he could not give an answer to that.

The Relaxation of London Building Regulations

For some days recently a Select Committee of the House of Lords was occupied in the consideration of the London County Council (General Powers) Bill, by which the L.C.C. seek powers to relax regulations concerning the erection of buildings where it is contended that the existing regulations are too stringent. Under the Bill the powers to issue regulations are to be extended with respect to the conversion of any building or part of a building constructed wholly or partly of reinforced concrete.

Mr. Charteris, K.C., for the L.C.C., explained that the Council desired to have powers to waive the requirements of the existing regulations in order to facilitate the erection of any particular building to be constructed wholly or partly of reinforced concrete. They also asked for similar powers with regard to the conversion of such buildings. It had been found that the existing regulations were too rigid, and the Council were satisfied that the modifications proposed might be made without in any way endangering the public safety. He criticized the attitude of the Ministry of Health, in opposing the granting of discretionary powers, as " unreasonable."

Mr. Tasker, the chairman of the L.C.C. Building Acts Committee gave evidence in support of Mr. Charteris's statement. In cross-examination by Mr. Henderson, K.C. (representing the Surveyors' Institute, the Institute of Structural Engineers, the Royal Institute of British Architects, and the Institute of Civil Engineers), Mr. Tasker said that the right of appeal to an appeal tribunal given under a previous Act in regard to steel-frame buildings was not taken away by the present Bill. His view was that the right of appeal which existed in regard to steel-frame buildings should apply to reinforced concrete buildings.

Mr. G. Topham Forrest, architect to the L.C.C., gave evidence as to the desirability of powers being granted to the local authorities in relation to structural alterations. All matters relating to the stability of buildings, he said, ought to be under the control of the County Council as the final authority. Other matters might be subject to appeal. He saw no objection to the existing right of appeal under the Act of 1909.

Professional Societies and Right of Appeal.

Mr. Henderson, K.C., on behalf of the societies above mentioned, said that the objection of those societies was on the ground that if the L.C.C. were to be authorized to make additional regulations there should be the right of appeal. As matters stood, the petitioners could convey their opinions to the L.C.C., but they had no guarantee that the recommendations which they made would be conveyed to the Ministry of Health. They asked that they should have the power to make direct representations to the Ministry. The statement made by Mr. Forrest, however, with regard to the intention of the L.C.C. as to the right of appeal, made it unnecessary for the petitioners to object further to the County Council's proposals. Enforcements of the regulations of the L.C.C. should be subject to appeal to a tribunal set up for that purpose.

The committee eventually decided that the clause dealing with the regulations as to reinforced concrete buildings must be amended so as to bring the regulations into accordance with the Act of 1909 in respect to the powers of appeal.

Housing Progress

Answering a question put by Mr. Ainsworth in the House of Commons, Sir K. Wood, the Parliamentary Secretary to the Ministry of Health, said that the following statement showed the number of houses completed during the twelve months to

May 1, 1926, in respect of which the Exchequer subsidy under the Housing Acts of 1923 and 1924 was payable :

Month.	Number of houses in respect of which—		
	£6 a year for 20 years is payable.	£9 a year for 40 years is payable.	£12 10s. a year for 40 years is payable.
1925			
May	5,890	1,160	42
June	6,728	1,773	48
July	6,274	1,857	58
August	6,878	1,397	35
September	7,755	2,687	69
October	6,477	2,602	135
November	7,075	2,450	107
December	7,416	2,026	95
1926			
January	4,430	2,674	83
February	5,982	3,168	131
March	7,329	3,738	170
April	6,339	3,745	150
Totals ..	78,573	29,277	1,123

THE NEW CHENIL GALLERIES

The general contractors for the New Chenil Galleries (illustrated on pages 854 to 858) were Messrs. Perry & Co. (Bow), Ltd., who also carried out the demolition, excavation, foundations, fireproof construction, partitions, and the plaster and decorative plaster work. The clerk of works was Mr. A. Taylor, and the general foreman, Mr. C. Wilson. The contract price was £18,102, the price per foot cube being 1s. 10½d., and the price per foot square, 47s. 6d. Among the sub-contractors were the following : Thos. Faldo & Co., Ltd., dampcourses and asphalt; The British Reinforced Concrete Engineering Co., Ltd., reinforced concrete; London Brick Co. and Forders, Ltd., Flettons; Eastwoods, Ltd., picked stock facings; Stuart's Granolithic Co., Ltd., artificial stone, and granolithic flooring ; Redpath Brown & Co., Ltd., structural steel; T. and W. Farmiloe, Ltd., glass; Mellowes & Co., Ltd., patent glazing; Francis Morton (Jr.), & Co., spring dance floor; Hollis Bros. & Co., Ltd., composition flooring; Rosser and Russell, Ltd., central heating, boilers, and ventilation; T. Clarke & Co., Ltd., electric wiring, electric light fixtures, and bells; H. Pontifex & Sons, Ltd., sanitary fittings ; Stuart's Granolithic Co., Ltd., and Old Delabole Slate Co., slate stairtreads; Robert Adams, door furniture and cloakroom fittings; Crittall Manufacturing Co., Ltd., casements; Bayliss, Jones, and Bayliss, Ltd., iron staircases; George Johnson, Ltd., lifts; J. G. Tuxford was the contractor for the slating of the roofs and mansards. All the slates on the mansard roofs are Green Randoms from the Old Delabole Slate Quarries, and the slates on the other roofs are from the Oakeley Slate Quarry Co., Ltd.

TRADE NOTES

Messrs. Medway's Safety Lift Company, Limited, of 1-2 Silex Street, Blackfriars Road, S.E.1, have secured the contract for the supply of the heavy duty goods lift for the New Central Stores, Wakefield, now in course of erection for the West Riding County Council. The architect is Mr. Percy O. Platts, A.R.I.B.A.

Tangent power bells in incombustible cases with coils so wound that they can be connected direct to service mains of any normal voltage are already very popular, and are recommended by the manufacturers, Messrs. Gent & Co., Ltd., of Faraday Works, Leicester, for industrial and other purposes in positions where current, either D.C. or A.C., is laid on. Tangent bells can be connected by ordinary electric light wire direct to pushes designed for the purpose. Instead, if preferred, ordinary pushes with ordinary electric bell wiring may be connected up to a high-voltage relay and service current put thereby on to the bell as a local circuit. The diagrams given in a leaflet just issued by the firm show both methods of connecting. Even small bells—4 in. diameter, for instance—can be operated from service mains as well as powerful sounders. Power bells and accessories for use with the system are also illustrated and described in the leaflet.

A good selection of wall and table telephones, suitable for every type of building, from the home to the office, hotel, or warehouse, is shown in the new catalogue issued by the same firm. Among the most interesting, perhaps, are the Regent and the Electromatic systems of central battery interphones. The former are for use as central and sub-stations, or where it is desired to provide intercommunication between different positions in domestic, business, or factory premises, and where only one conversation is likely to take place at one time. They are notable for their simplicity, ease of fixing and maintenance, and reliability, and they are free from auto-hooks or cradles. Originally their manufacture was restricted to five-way instruments, but at the request of the Government and other large buyers, ten-way, and even fifteen-way instruments have been made, and are, we are informed, in constant demand. The Electromatic system provides a comparatively inexpensive, though efficient, means of communication between different stations. It works on the central battery principle, both for ringing and speaking. A simple relay movement is operated by the incoming calling current, the relay being reset automatically when originating a call, by the action of pressing the ringing button. The instruments are designed to enable the energy for both ringing and speaking purposes to be drawn from one battery for the whole installation, without in any way affecting the efficiency and enabling any number of conversations to be in progress simultaneously without interference. All kinds of telephonic equipment and accessories are illustrated and described, and there is a very useful set of diagrams of connections.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

12712.—Barnes, A. H., Hillier, E. R.—Frame buildings. May 18.
12618.—Batchelor, A.—Building material. May 17.
12915.—Boyd, J.—Metallic building construction. May 20.
12769.—Clarke, A. W.—Gratings, flooring, &c. May 18.
12599.—Clements, J.—Construction of concrete walls. May 17.
12990.—Leighton, J. M.—Houses, &c. May 21.

SPECIFICATIONS PUBLISHED

252224.—Laurie, A. P.—Production of partition walls and ceilings.
252279.—Caley, E. C.—Houses and like buildings, yard and like walls, and the method of constructing the same.
252103.—Dehn, F. B.—Building constructions.

ABSTRACT PUBLISHED

249898.—Highes, H. Wilson.—Roofing and lining boards.

OBITUARY

Mr. Sydney Howard

The recent death of Mr. Sydney Howard must have come as a great shock to all his wide circle of friends and acquaintances. Mr. Howard was educated at Highgate, and, on leaving school, set up in Kent as a farmer, devoting his time chiefly to hop-growing. A proof of his amazing versatility lies in the fact that after quite a short time he was invited to join the firm of Messrs. Huntly and Palmer as manager and assistant director. But from his youth he had always been keenly interested in decorative art, and in 1905 his wishes were gratified when he joined Messrs. F. de Jong as a director, in which capacity he remained for the rest of his life. For some time he had been failing in health, but his death at the age of sixty-one came quite suddenly and unexpectedly, and has caused an irreparable loss both to his friends and to the business with which he was so prominently associated.

THE WEEK'S BUILDING NEWS

Private Houses at Colwyn Bay

The Colwyn Bay Council has passed plans for twenty-five private houses.

Housing at Faversham

The Faversham Council has decided to build thirty houses, at a cost of £24,000.

Housing at Harrogate

A move is shortly to be made to build another 100 houses at Harrogate.

Subsidies for Doncaster

Application is to be made for permission to grant 250 more subsidies for the erection of houses at Doncaster.

A Site for an Eltham School

The Woolwich Borough Council has chosen a site for an elementary school at Eltham.

Housing at Leyland

The Leyland Council has decided to apply for sanction to build a further 100 houses under the 1923 Housing Act.

Land for Derby

The Derby Town Council has decided to acquire about 26 acres of land for the erection of workmen's dwellings.

A New L.C.C. Housing Site

The L.C.C. has obtained powers to buy 846 acres at Carshalton and Morden for a new housing suburb.

A Big Housing Scheme for Eltham

The Woolwich Borough Council proposes building 500 concrete houses at Eltham, at a cost of £250,000.

A Power Station for Oldham

The Oldham Corporation proposes to erect a power station at a cost of over half a million pounds.

A Matlock Housing Scheme

The Matlock Urban Council has chosen a site near the railway station for a housing scheme.

A New Church for Kenton

A new church is to be built at Kenton in the parish of Harrow.

A Technical School at Omagh

The Omagh Regional Education Committee has recommended the building of a new technical school.

Electricity Improvements at Marylebone

The Marylebone Borough Council has received permission to borrow £115,709 for extensions to the electricity station.

Housing at Gravesend

The Ministry of Health has approved of the erection of ninety-four houses on the King's Farm estate at Gravesend.

Another Sheffield Cinema

A large cinema is to be erected in Barker's Pool, Sheffield, for the Provincial Cinema Co.

A Proposed Town Hall for Newport

The Newport Town Council is considering a proposal to purchase the Clytha Park site for the erection of a new town hall.

Further Housing at Huntingdon

The Huntingdon Town Council has decided to apply for a loan to cover the cost of the erection of thirty additional houses.

Houses Approved at Northampton

The clerk reported that the Ministry of Health has approved of the Northampton Rural District Council's programme for the erection of seventy more subsidy houses.

Housing at Chipping Sodbury

The Chipping Sodbury Rural District Council has decided to apply to the Ministry of Health for sanction to erect fifty-eight houses.

Housing at Wokingham

The Wokingham Rural District Council proposes to apply to the Ministry of Health for sanction to borrow a loan in connection with the erection of a further fifty houses.

Plans Passed at Bradford

Over 150 plans have been passed at the Bradford Street Improvement and Building Committee, for houses and bungalows to be erected in various parts of the city.

Municipal Offices for Dunbar

The Dunbar Town Council has decided to erect municipal offices on the site adjacent to the historic Council Chambers instead of the proposed public hall.

Housing at Walton

The Sanitary and Buildings Committee of the Walton Urban District Council has provisionally approved plans for thirty-two houses in Molesey Road.

A Glasgow Golf Course for Housing

The Glasgow Corporation has decided to purchase the golf course of the Glasgow North-Western Golf Club for housing purposes.

Two Dublin Housing Schemes

The Dublin Borough Commissioners propose to carry out housing schemes in the Drumcondra and Glasnevin areas, and of the 1,500 houses to be erected, 534 are to be started immediately.

A Bath Bridge to be Widened

The Bath Corporation has decided to reconstruct and widen the bridge across the Avon at a cost of £50,000, after an adverse report following an examination by divers.

Housing Progress at Leeds

The Leeds City Corporation propose to use a site at York Road, near Killingbeck, for a scheme of 500 houses, and the Hollin Park estate at Oakwood Lane, Roundhay, for the erection of 361 houses.

Housing at Glasgow

The Glasgow Dean of Guild Court has granted a warrant to the Housing Department of the Glasgow Corporation to erect 100 dwelling-houses at Amulree Street, Tollcross.

A Carlisle Purchase

The General Purposes Committee of the Carlisle City Council has agreed to purchase part of the Carlisle Prison site for £16,000. Important street improvements are anticipated.

Houses for Devon Council Employees

A scheme for the erection of 102 houses for employees of the Devon County Council has been adopted by the Public Health and Housing Committee of the Council. The cost is estimated at £60,000.

Additional Houses at Maxwelltown

The Maxwelltown Town Council has received permission from the Board of Health to add twenty-four houses to the original scheme of 120 houses at Troqueer Holm.

Progress at Symington

The Housing Committee of the Symington District Council has received the sanction of the Ministry of Health to a further fifty grants of the owner-occupier subsidy. Plans of fifteen new houses in the district have been approved.

A Bridge for the South Esk

The Montrose Town Council and Forfar County Road Board have decided to invite plans for the construction of a bridge over the South Esk to replace the present suspension one. An expenditure of £90,000 has been sanctioned.

Progress in Scotland

The Second Scottish National Housing Company, Edinburgh, has been given permission to erect 148 houses of three apartments, and fifty-six of six apartments at Robroyston, and to build roads there. The estimated cost is about £70,000.

Foreign Building Delegates Banned

An international conference of building trade workers which was to have opened in London has been cancelled by the organizers. This course was adopted on account of the fact that German and Hungarian delegates had been refused visas for their passports, and could not consequently be admitted into this country. In a letter from Hamburg, the Federation were told that the refusal to grant the visas was because of the Emergency Powers Act.

READERS' QUERIES

HOW TO IDENTIFY TIMBER

R. H. writes: "When roofing timbers, such as purlins, principles, etc., are brought on to a job ready for fixing, how can one ascertain accurately whether they are of redwood or whitewood? Can you recommend any book which makes it clear how to distinguish different timbers? What is the correct joint to use between a purlin and a hip or valley rafter? This does not seem to be mentioned in any book on building construction."

The identification of the timber either as redwood or whitewood is a matter of careful inspection, and comparison with typical examples of each of these woods. The samples to be compared must be prepared as nearly as possible under the same conditions, and may be clean from the saw, planed, scraped, glass papered, or polished with their own dust and friction. In practice the usual way to determine the nature of any particular building timber is to take samples of it and compare them with stocks of sound timber in the possession of other contractors or timber merchants. This should determine the ordinary trade description of the material. In detail timbers may be distinguished from one another by their relative weight (specific gravity), their colour, scent, formation, or pattern of grain in tangential, radial, or transverse section, and by the direction and disposition of knots if any exist in the pieces under observation. Hardness and strength, and the way a timber responds to the action of ordinary tools, are also confirmatory tests in the hands of experienced carpenters. If these means of identification leave any doubt the authorities of the Natural History Museum at South Kensington should be consulted, and a microscopic examination of the cellular structure of the sample will reveal its similarity to some one or other of the collection of named specimens. Specimens should be labelled either as "heartwood" or "sapwood" in accordance with the position from which they have been cut out of the original log.

It is well to make sure of the character of the wood before raising any complaint to the contractor. If it is inconvenient to take samples from the job (as the work has already been prepared ready for fixing) it is still practicable to bring samples of the woods you believe it may be and compare them on the site. Then if your own eyes do not settle the matter, and a microscopic examination proves necessary, ask your contractor for samples of the timber he has used. Compare these with the work on the site to assure yourself that they are of the same character, and then submit them to the Museum for identification.

The current issue of *Specification* contains information concerning timbers and a coloured plate illustrating the characteristic grain of several specimens. *A Guide to the Identification of our more useful Timbers*, by H. Stone, Cambridge, 1920, 7s. net, is a useful book for your purpose.

Joints at the angles of purlins in a hipped roof may be called upon to withstand either *a:* compression as the rafters bend downwards in the middle of their length, or *b:* tension as the rafter feet spread outwards if the walls move outward under their pressure. Lap dovetail joints secured with a coach screw or bolt are useful in either condition. The corner of the purlin is notched out to the widths and to the slopes of the hip and valley rafters which pass the purlin without having their substance reduced by notching. Mitreing the purlins permits of half the notch for the rafter being made in each purlin with a saw alone, instead of with saw and chisel, and is favoured by builders specially where the faces of the purlins are normal to the slope of the roof instead of vertical. Additional strength may be given to the joints by laying gusset pieces across the angles at the hips and spiking them to both purlins. At valleys the purlins may be halved into one another with butt ends left on beyond the junction, or, if mitred, a steel strap may be bolted on around the angle. To reduce calculation and measurement to a minimum in small roofs it is usual to put up the rafters first, securely spiking all jack rafters to the hips and valleys, and then to raise the purlins up from below, and mark and cut the mitres and notches by scribing on application to the actual work. The rafters are then spiked to the purlins which are last of all propped and braced up from any convenient points on partition walls, ceiling-stringers, or chimney-stacks. In large roofs provided with trusses the purlins are supported first, and the common and hip rafters notched over them. W. H.

The Editor welcomes readers' enquiries on all matters connected, directly or indirectly, with architectural practice. These enquiries are dealt with by a board of experts, to which additions are constantly being made as, and when, need arises. No charge is made to readers for this expert service. The only thing we ask is that diagrams should be clearly and legibly drawn out and lettered in black ink.—Ed. A.J.

WATERPROOF FLOORING

Reader writes: "When laying flooring, such as rubber tiling, cork tiling, linoleum, etc., direct to concrete with an adhesive, difficulty is sometimes experienced where the concrete is laid direct to the earth owing to moisture rising and settling between the concrete surface and the floor covering, thus preventing the adhesion of the two. Various waterproof adhesives have been tried, but they all seem unsuitable under the conditions described. What seems to be wanted is: a: *A simple treatment to the finished concrete floor, effectually to seal it against rising moisture, or* b: *a really waterproof cement which would keep the concrete floor and its top covering closely united and remain impervious to moisture. Any treatment under* a *should be convenient of performance—as, for example, brushing a liquid preparation over the whole surface. If a floor could be effectively sealed in such a way one of the usual cements could then be used with safety and success. If solution is to be found in the adhesive, the latter would seem to require an affinity to moisture, and be strengthened by it rather than otherwise. Perhaps the experience of one of your experts might enable him to offer some advice on this matter. It should be borne in mind, however, that salvation must normally be along the lines of* a *and* b *above. The concrete is usually finished, and to all appearance dry when the flooring is laid, consequently it is not then possible to incorporate precautionary measures such as a dampcourse, a top layer of asphalt, or special waterproof cement screeding. There may be a Research Committee or some other body to whom one could refer for advice in such a matter, in which case, perhaps, the details could be given."*

a: The most effective treatment, and one which has answered in my experience, is to allow time for the finished floor to get thoroughly aired by leaving it uncovered until the contained moisture has evaporated. Even a good waterproof concrete floor gives off a certain amount of moisture, and this is sufficient to make a most unpleasant mess when mixed with an adhesive and confined between the floor and the linoleum. To know when the floor is well enough aired, attempt to lay a sample of a few square yards of flooring with any of the usual adhesives. If it does not dry off properly, take it up again; if the sample is a success, proceed with the rest of the floor. This method has succeeded with ordinary concrete floors laid and finished with a cement and sand screeding by the builder, though in one case, six months airing had to be allowed. A better floor, with waterproofed cement and a sound granolithic topping would probably not require so long, provided the airing was done properly, ample ventilation being given, and only loosely woven rush or coconut matting being used to protect the concrete surface from dusting up in the interval. Sealing the surface of the concrete floor against rising moisture can only be partially satisfactory. It may convert a badly made concrete into a fairly good one, but airing to get rid of the contained water and the water applied with the sealing material will still be necessary. The various waterproofing solutions on the market should be experimented with. The person actually laying the flooring should conduct the tests, for workmen do not always follow the manufacturers' directions, and the experiment is rendered inconclusive.

b: Messrs. Central Chemicals, Limited, 71 Central Buildings, Southwark Street, London, S.E.1, prepare "Fortil rubber flooring cement specially designed for fixing rubber flooring to wood and damp concrete floors, waterproof and heatproof, and exceptionally tenacious." The same firm make several heat and moisture-resisting cements, and should be consulted. The adhesives I have personally experimented with have all yielded better results if the flooring is carefully pressed down with heavy weights immediately it is laid.

W. H.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₁	Abergavenny	Do.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W.Counties	1 8	1 3½
A₃	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W.Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W.Counties	1 8	1 3½
B₃	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W.Counties	1 8	1 3½
A₃	Atherstone	Mid. Counties	1 6½	1 2
B₃	Aylesbury ..	S. Counties	1 4½	1 0½
B	BATH ..	S.W.Counties	1 6	1 1½
B₃	Banbury ..	S. Counties	1 4½	1 0½
B₃	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W.Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₃	Basingstoke	S.W. Counties	1 4½	1 0½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₃	Bewdley ..	Mid.Counties	1 6½	1 2
B₃	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W.Counties	†1 9	1 3½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W.Counties	1 8	1 3½
A	Blackpool	N.W.Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₃	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W.Counties	1 8	1 3½
A₃	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
A	Bradford ..	Yorkshire	1 8	1 3½
A₃	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse ..	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₃	Brixham ..	S.W. Counties	1 4½	1 0½
A₃	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W.Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W.Counties	1 8	1 3½
A₃	Buxton ..	N.W.Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₃	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W.Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon ..	N.W.Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford ..	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
B	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W.Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	‡1 8	1 3½
B₃	Chichester ..	S. Counties	1 4½	1 0½
A	Chorley ..	N.W.Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W.Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W.Counties	1 8	1 3½
B₁	Colwyn Bay	N.W.Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₃	Crewe ..	N.W.Counties	1 6½	1 2
A₃	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W.Counties	1 8	1 3½
B₃	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W.Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster ..	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W.Counties	1 4	1 0½
A₃	Driffield ..	Yorks	1 6½	1 2
A₃	Droitwich ..	Mid. Counties	1 6½	1 2
A₂	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₃	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W.Counties	1 8	1 3½
B₃	Folkestone ..	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W.Counties	1 8	1 3½
B₃	Frome ..	S.W.Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester ..	S.W.Counties	1 6	1 1½
A₂	Goole ..	Yorkshire	1 7	1 2½
B₁	Gosport ..	S. Counties	1 5½	1 1½
A₃	Grantham ..	Mid. Counties	1 6½	1 2
A₂	Gravesend ..	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A₁	Hanley ..	Mid. Counties	1 7½	1 2½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₃	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S.W.Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W.Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

The initial letter opposite each entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; column II for labourers; the rate for craftsmen working at trades in which a separate rate maintains, is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₂	Kendal ..	N.W. Counties	1 5	1 1
B₂	Keswick ..	N.W.Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A₃	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 5	1 1
A₁	LANCASTER	N.W.Counties	1 7½	1 2
A₃	Leamington	Mid. Counties	1 6½	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₃	Lewes ..	S. Counties	1 4½	1 0½
A₃	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W.Counties	‖1 9	1 3½
B	Llandudno	N.W.Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12–15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W.Counties	1 7½	1 2½
B	Maidstone ..	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₃	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₃	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
A₁	S. and E. Glamorganshire Morecambe	N.W. Counties	1 7½	1 2½
A₃	NANTWICH	N.W.Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E.Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W.Counties	1 8	1 3½
A₃	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₃	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	¶1 8	1 3½
A	Pontefract ..	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W.Counties	1 8	1 3½
A	QUEENSFERRY	N.W.Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₃	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₃	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W.Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W.Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₃	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₃	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens ..	N.W.Counties	1 8	1 3½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₃	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	S. Counties	1 6	1 1½
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W.Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W.Counties	1 8	1 3½
A	Stockton-on Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W.Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W.Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W.Counties	1 7	1 2½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₂	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W.Counties	1 8	1 3½
A₃	Warwick ..	Mid. Counties	1 6½	1 2
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₃	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W.Counties	1 8	1 3½
A	Wigan ..	N.W.Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₃	Worcester ..	Mid. Counties	1 6½	1 2
A	Worksop ..	Yorkshire	1 8	1 3½
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

* Plasterers, 1s. 9d.
† Carpenters and Painters, 1s. 8½d.
‡ Plumbers, 1s. 9d.
§ Painters, 1s. 6d.
‖ Carpenters and Plasterers, 1s. 8½d.
¶ Painters, 1s. 7d.

PRICES CURRENT

EXCAVATOR AND CONCRETOR

EXCAVATOR, 1s. 4½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; NAVVY, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	15	6

Screened ballast or gravel, add 10 per cent. per yd.
Clinker, breeze, etc., prices according to locality.

Portland cement, per ton	£2	19	0
Lias lime, per ton	2	10	0

Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.

Transport hire per day:

Cart and horse	£1	3	0	*Trailer*	£0	15	0
3-ton motor lorry	3	15	0	*Steam roller*	4	5	0
Steam lorry, 5-ton	4	0	0	*Water cart*	1	5	0

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube . 0 3 0

Exceeding 6 ft., but under 12 ft., add 30 per cent.
In stiff clay, add 30 per cent.
In underpinning, add 100 per cent.
In rock, including blasting, add 225 per cent.
If basketed out, add 80 per cent. to 150 per cent.
Headings, including timbering, add 400 per cent.

RETURN, fill, and ram, ordinary earth, per yd.	£0	2	4
SPREAD and level, including wheeling, per yd.	0	2	4
PLANKING, per ft. sup.	0	0	5

DO. over 10 ft. deep, add for each 5 ft. depth 30 per cent.

HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	£0	2	1
DO. 6 in. thick, per yd. sup.	0	2	10
PUDDLING, per yd. cube	1	10	0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3	0
DO. 6-2-1, per yd. cube.	1	18	0

DO. in upper floors, add 15 per cent.
DO. in reinforced-concrete work, add 20 per cent.
DO. in underpinning, add 60 per cent.

LIAS LIME CONCRETE, per yd. cube	£1	16	0
BREEZE CONCRETE, per yd. cube	1	7	0
DO. in lintols, etc., per ft. cube	0	1	6

DRAINER

LABOURER, 1s. 4½d. *per hour*; TIMBERMAN, 1s. 6d. *per hour*; BRICKLAYER, 1s. 9½d. *per hour*; PLUMBER, 1s. 9½d. *per hour*; WATCHMAN, 7s. 6d. *per shift.*

Stoneware pipes, tested quality, 4 in., per yd.	£0	1	3
DO. *6 in., per yd.*	0	2	8
DO. *9 in., per yd.*	0	3	6
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0	6	9
DO. *6 in., per yd.*	0	9	2
Portland cement and sand, see "Excavator" above.			
Lead for caulking, per cwt.	£2	5	6
Gaskin, per lb.	0	0	5½

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft.	0	4	3
DO. 6 in., per ft.	0	5	0
DO. 9 in., per ft.	0	7	9
CAST-IRON DRAINS, jointed in lead, 4 in., per ft.	0	9	0
DO. 6 in., per ft.	0	11	0

Note.—These prices include digging and filling for normal depths, and are average prices.
Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

BRICKLAYER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

London stocks, per M.	£4	19	0
Flettons, per M.	3	0	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	21	10	0
DO. *headers, per M.*	21	0	0
Colours, extra, per M.	£5	10	0
Seconds, less, per M.	1	0	0
Cement and sand, see "Excavator" above.			
Lime, grey stone, per ton	£2	12	0
Mixed lime mortar, per yd.	1	6	0
Damp course, in rolls of 4½ in., per roll	0	2	6
DO. *9 in. per roll*	0	4	9
DO. *14 in. per roll.*	0	7	6
DO. *18 in. per roll*	0	9	6

BRICKWORK in stone lime mortar, Flettons or equal, per rod	33	0	0
DO. in cement do., per rod	36	0	0

DO. in stocks, add 25 per cent. per rod.
DO. in blues, add 100 per cent. per rod.
DO. circular on plan, add 12½ per cent. per rod.

FACINGS, FAIR, per ft. sup. extra	£0	0	2
DO. Red Rubbers, gauged and set in putty, per ft. extra	0	4	6
DO. salt, white or ivory glazed, per ft. sup. extra	0	5	6
TUCK POINTING, per ft. sup. extra	0	0	10
WEATHER POINTING, per ft. sup. extra	0	0	3
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1½ in., per yd. sup..	0	6	0
DO. 2 in., per yd. sup.	0	7	0
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ¾ in., per yd	0	8	6
DO. SKIRTING, 6 in.	0	0	11
BREEZE PARTITION BLOCKS, set in Cement, 1½ in. per yd. sup.	0	5	3
DO. DO. 3 in..	0	6	6

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. Though every care has been taken in its compilation it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry.

MASON

MASON, 1s. 9½d. *per hour*; DO. *fixer*, 1s. 10½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour.*

Portland Stone:			
Whitbed, per ft. cube	£0	5	3
Basebed, per ft. cube	0	5	4
Bath stone, per ft. cube	0	3	9

Usual trade extras for large blocks.

York paving, av. 2½ in., per yd. super.	0	6	6
York templates sawn, per ft. cube	0	6	9
Slate shelves, rubbed, 1 in., per ft. sup.	0	2	6

Cement and sand, see "Excavator," etc., above.

HOISTING and setting stone, per ft. cube	£0	2	2

DO. for every 10 ft. above 30 ft., add 15 per cent.

PLAIN face Portland basis, per ft. sup.	£0	2	8
DO. circular, per ft. sup.	0	4	0
SUNK FACE, per ft. sup.	0	3	9
DO. circular, per ft. sup.	0	4	10
JOINTS, arch, per ft. sup.	0	2	6
DO. sunk, per ft. sup.	0	2	7
DO. DO. circular, per ft. sup..	0	4	6
CIRCULAR-CIRCULAR work, per ft. sup.	1	2	0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0	1	1
DO. circular, do. per ft. run	0	1	4
HALF SAWING, per ft. sup.	£0	1	0

Add to the foregoing prices if in York stone 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0	6
RUBBED round nosing to do., per ft. lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed.	1	13	0

SLATER AND TILER

SLATER, 1s. 9½d. *per hour*; TILER, 1s. 9½d. *per hour*; SCAFFOLDER, 1s. 5½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*

N.B.—Tiling is often executed as piecework.

Slates, 1st quality, per M:			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10

Cement and sand, see "Excavator," etc., above.

Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

SLATING, 3 in. gauge, compo nails, Portmadoc or equal:

Ladies, per square	£4	0	0
Countess, per square	4	5	0
Duchess, per square	4	10	0
WESTMORLAND, in diminishing courses, per square	6	5	0
CORNISH DO., per square	6	3	0
Add, if vertical, per square approx.	0	13	0
Add, if with copper nails, per square approx.	0	2	6
Double course at eaves, per ft. approx.	0	1	0
TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	5	6	0
DO., machine-made DO., per square	4	17	0

Vertical Tiling, including pointing, add 18*s.* 0*d.* per square.

FIXING lead soakers, per dozen	£0	0	10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10	0
LABOUR only in laying slates, but including nails, per square	1	0	0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

CARPENTER, 1s 9½d. *per hour*; JOINER, 1s. 9½d. *per hour*; LABOURER, 1s. 4½d. *per hour.*

Timber, average prices at Docks, London Standard, Scandinavian, etc. (equal to 2nds):

7×3, per std.	£23	0	0
11×4, per std.	33	0	0

Memel or Equal. Slightly less than foregoing.

Flooring, P.E., 1-in., per sq.	£1	5	0
DO. *T. and G., 1 in., per sq.*	1	5	0
Planed Boards, 1 in.×11 in., per std.	33	0	0
Wainscot oak, per ft. sup. of 1 in.	0	2	0
Mahogany, per ft. sup. of 1 in.	0	2	0
DO. *Cuba, per ft. sup. of 1 in.*	0	3	0
Teak, per ft. sup. of 1 in..	0	3	0
DO., *ft. cube*	0	15	0
FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5	9
DO. framed in floors, roofs, etc., per ft. cube	0	6	3
DO., framed in trusses, etc., including ironwork, per ft. cube	0	7	3
PITCH PINE, add 33⅓ per cent.			
FIXING only boarding in floors, roofs, etc., per sq.	0	13	6
SARKING FELT laid, 1-ply, per yd.	0	1	6
DO., 3-ply, per yd.	0	1	9
CENTERING for concrete, etc., including horsing and striking, per sq.	3	10	0
SLATE BATTENING, per sq.	0	18	6

PRICES CURRENT; *continued.*

CARPENTER AND JOINER; *continued.*

DEAL GUTTER BOARD, 1 in., on firring, per sq.	£3	5	0
MOULDED CASEMENTS, 1¼ in., in 4 sqs., glazing beads and hung, per ft. sup.	0	3	0
DO., DO., 2 in., per ft. sup.	0	3	3
DEAL cased frames, oak sills, 2 in. d.h. sashes, brass-faced pulleys, etc., per ft. sup.	0	4	0
DOORS, 4 pan. sq. b.s., 2 in., per ft. sup.	0	3	6
DO., DO., DO., 1¼ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1¼ in., per ft. sup.	0	3	3
If in oak multiply 3 times.			
If in mahogany multiply 3 times.			
If in teak multiply 3 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone:			
Deal, 1 in., per yd. sup., average	0	10	0
DO., 1¼ in., per yd., sup., average	0	12	0
DO., DO., 1¼ in. maple blocks	0	15	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1¼ in. tread, fixed, per ft. sup.	0	3	6
2 in. deal strings, fixed, per ft. sup.	0	3	9

PLUMBER

PLUMBER, 1*s.* 9½*d. per hour;* MATE OR LABOURER, 1*s.* 4½*d. per hour.*

Lead, milled sheet, per cwt.	£2	2	0
DO. *drawn pipes, per cwt.*	2	3	6
DO. *soil pipe, per cwt.*	2	5	6
DO. *scrap, per cwt.*	1	9	6
Copper, sheet, per lb.	0	1	1
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	5
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	1
DO. *4 in. per yd.*	0	5	0
R.W.P., 2½ in., per yd.	0	2	0
DO. *3 in., per yd.*	0	2	5
DO. *4 in., per yd.*	0	3	3
Gutter, 4 in. H.R., per yd.	0	1	5
DO. *4 in. O.G., per yd.*	0	1	9
MILLED LEAD and labour in gutters, flashings, etc.	3	9	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	1
DO. ¾ in., per ft.	0	2	5
DO. 1 in., per ft.	0	3	3
DO. 1¼ in., per ft.	0	4	6
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.	0	2	5
DO. 3 in., per ft.	0	2	10
DO. 4 in., per ft.	0	3	3
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	7
DO. O.G., 4 in., per ft.	0	2	10
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	7	0
DO 3 in., per ft.	0	6	0
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS only, with all joints	1	18	0
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

PLASTERER, 1*s.* 9½*d. per hour (plus allowances in London only);* LABOURER, 1*s.* 4½*d. per hour.*

Chalk lime, per ton	£2	11	0
Hair, per cwt.	0	18	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	8
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	£3	9	0
Lath nails per lb.	0	0	4
LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ¾ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	5
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	6
DO. 26 oz.	0	0	7½
Cathedral white, per ft.	0	0	6½
Polished plate, British ⅛ in., up to 2 ft. sup.	0	2	0
DO. *3ft. sup.*	0	2	6
DO. *7 ft. sup.*	0	3	6
DO. *25 ft. sup.*	0	4	0
DO. *100 ft. sup.*	0	4	6
Rough plate, ¼ in.	0	0	6
DO. ¼ *in., per ft.*	0	0	6½
Linseed oil putty, per cwt.	0	16	0
GLAZING in putty, clear sheet, 21 oz.	0	0	11
DO. 26 oz.	0	1	0
GLAZING in beads, 21 oz., per ft.	0	1	1
DO. 26 oz., per ft.	0	1	4
Small sizes slightly less (under 3 ft. sup.).			
Patent glazing in rough plate, normal span. 1*s.* 6*d.* to 2*s.* per ft.			
LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up	£0	3	6
Glazing only, polished plate, 6½*d.* to 8*d.* per ft. according to size.			

DECORATOR

PAINTER, 1*s.* 8½*d. per hour;* LABOURER, 1*s.* 4½*d. per hour;* FRENCH POLISHER, 1*s.* 9*d. per hour;* PAPERHANGER, 1*s.* 8½*d. per hour.*

Genuine white lead, per cwt.	£3	0	0
Linseed oil, raw, per gall.	0	3	10
DO., *boiled, per gall.*	0	4	1
Turpentine, per gall.	0	6	0
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	4	0
Distemper, washable, in ordinary colours, per cwt., and up	2	0	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4
Single gold leaf (transferable), per book	0	1	11
Varnish copal, per gall. and up	0	18	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	1	0	0
French polish, per gall.	0	19	0
Ready mixed paints, per gall. and up	0	10	6
LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	£0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SMITH

SMITH *weekly rate equals* 1*s.* 9½*d. per hour;* MATE, *do.* 1*s.* 4*d. per hour;* ERECTOR, 1*s.* 9½*d. per hour;* FITTER, 1*s.* 9½*d. per hour;* LABOURER, 1*s.* 4*d. per hour.*

Mild steel in British standard sections, per ton	£12	10	0
Sheet steel:			
Flat sheets, black, per ton	19	0	0
Do., Galvd., per ton	23	0	0
Corrugated sheets, galvd., per ton	23	0	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts, per cwt. and up	1	18	0
MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO., in small sections as reinforcement, per ton	16	10	0
DO., in compounds, per ton	17	0	0
DO., in bar or rod reinforcement, per ton	20	0	0
WROT. IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO., in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity. The measured work price is on the same basis per ft. sup.	£0	0	2½
FIBRE BOARDINGS, fixed on, but not including studs or grounds, per ft. sup.	0	0	6
Plaster board, per yd. sup. from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	17	0	0
DO., *red*	19	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.			
Plywood			
3 m/m alder, per ft. sup.	0	0	2
4½ m/m amer. white, per ft. sup.	0	0	3¾
¾ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½